

# Entrepreneur India



R.N.I. NO. 61509/95

AN ISO 9001-2015 CERTIFIED COMPANY

[www.entrepreneurindia.co](http://www.entrepreneurindia.co)

₹ 20/-

An Industrial Monthly Journal on

**INDUSTRIAL DEVELOPMENT, TECHNOLOGIES & PROJECT OPPORTUNITIES**

Vol. 30

No. 01

January 2024

16 Pages

**EDITOR :**
**AJAY KUMAR GUPTA**  
D.M.S., M.B.A.

Entrepreneurship Management

**ASSOCIATE EDITOR**
**P. K. TRIPATHI**  
UDANT GUPTA

**NIIR PROJECT CONSULTANCY SERVICES**

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi-110 007 (India).

Tel. : 91-11- 23843955, 23845886 Mob.: +91-9097075054, 8800733955

 E-mail : [info@niir.org](mailto:info@niir.org), [npcs.india@gmail.com](mailto:npcs.india@gmail.com), Website : [www.niir.org](http://www.niir.org), [www.entrepreneurindia.co](http://www.entrepreneurindia.co)

## About Us

NPCS is a well-known technical consultancy that focuses on Project Reports Compilation, and we have been following a tight system and procedure to assure only top quality in accordance with our clients' expectations in this rapidly increasing and changing market. We've created the list of the top projects to start your own business startups.

## Fertilizers Manufacturing Handbook

(Ammonium Sulfate, Diammonium Phosphate (DAP), Urea - Ammonium Nitrate, Neem Coated Urea, N.P.K. Complex Fertilizers, Single Superphosphate (SSP), Triple Superphosphate, Zinc Sulfate Monohydrate, Magnesium Sulfate with Manufacturing Process, Machinery Equipment Details & Factory Layout)

India's economy is heavily reliant on agriculture. One of the greatest contributors to the Gross Domestic Product is agriculture, along with forestry, fishing, and other related industries (GDP). It goes without saying that the fertilizer industry is one that the Indian economy cannot do without given how significant the agricultural sector is.

The success of the agricultural sector in India is largely dependent on the fertilizer industry. The benchmark that the food industry in India has set is mainly due to the many technically competent fertilizer producing companies in the country. The combined output of Nitrogenous (N) and Phosphatic (P) Chemical fertilizers has increased from a modest level.

Fertilizer Market Size will grow at a CAGR of 2.6%. Fertilizers have played a key role in the success of India's green revolution and subsequent self-reliance in food-grain production. The increase in fertilizer consumption has contributed significantly to sustainable production of food grains in the country.

The NPK fertilizers market (feed-grade) is

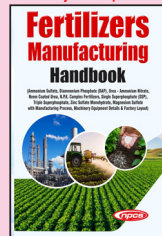
estimated at a CAGR of 4.1% these feed-grade fertilizers help animals attain faster growth and increase their weight by providing added nutrition to their meals.

The global diammonium hydrogen phosphate (DAP) driven by the product's rising usage in fertilizers to increase the crop yield. The compound has a high nutrient content which is required for crop nurture.

The global single superphosphate (SSP) market is expected to post a CAGR of close to 3%. Key factor driving the growth of the global single superphosphate (SSP) market is the increasing demand for phosphate fertilizers.

Triple Superphosphate Market is growing at a CAGR of 5.5%. Triple superphosphate typically contains 44-46% of diphosphorus pentoxide (P<sub>2</sub>O<sub>5</sub>) and are produced by reacting phosphoric acid with

₹ 2795/- US\$ 74.95-



phosphate rocks. The zinc sulfate market is expected to witness market growth at a rate of 7.50%. The global nitrogenous fertilizer market size growth rate (CAGR). The growth is attributed to the increasing popularity of agriculture on a commercial level across the world.

The global potash fertilizer market growth rate (CAGR) of 4.66%. The Global Ammonium Phosphate Market is expected to grow at a CAGR of 3.56% mainly due to robust demands from animal feed and fertilizers industries. The market has witnessed a significant boost from the enabling policy framework regarding yield enhancement of agri-produce.

Successful business ideas in fertilizers manufacturing is profitable and very viable. Thus, it is a good idea to venture into it by starting your own business. Read this book on for more information about fertilizers industry in detail. It will help you

understand how to get started with your own fertilizers manufacturing business. Fertilizers manufacturing is a great way to make money because of its high demand in today's market place.

The book contains detailed information about fertilizers manufacturing in which all aspects are covered. The book is of immense use to professionals in Fertilizers Manufacturing Handbook for quick revision as well as in day-to-day life where people would like to know about fertilizers. This book also serves as an excellent guide for those who want to venture into fertilizers manufacturing industry or have been associated with it.

A complete guide to the Fertilizers Manufacturing : Ammonium Sulfate, Diammonium Phosphate (DAP), Urea - Ammonium Nitrate, Neem Coated Urea, N.P.K. Complex Fertilizers, Single Superphosphate (SSP), Triple Superphosphate, Zinc Sulfate Monohydrate, Magnesium Sulfate. It's a veritable feast of how-to information, from concept through equipment acquisition.

## Handbook on Active Pharmaceutical Ingredients (API), Drugs & Pharmaceutical Products

Paracetamol, Aspirin, IV Fluids, Ointment, Metronidazole, Liquid Glucose, Surgical Cotton, Syrup, Tablet, Excipients, Pharmaceutical Salts with Manufacturing Process, Machinery Equipment Details and Factory Layout

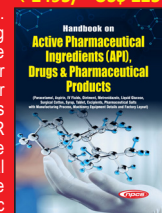
An Active Pharmaceutical Ingredient (API) is the active substance in a pharmaceutical drug that produces its therapeutic effect. APIs can be synthetic chemicals or natural sources such as plant extracts. APIs are components of drugs, the majority of which are manufactured by pharmaceutical companies. Drugs, on the other hand, are dosage forms that contain an API and are distributed to patients for use. Pharmaceutical products are any compounds used in the medical industry to diagnose, treat, cure, or prevent diseases. These products are typically formulated as drugs, vaccines, biologics, and medical devices, which can either be prescribed by a doctor or bought over-the-counter (OTC). They come in various forms such as tablets, capsules, syrups, ointments, creams, solutions, suspensions, implants, patches, and powders. Pharmaceutical products are manufactured under strict guidelines and must adhere to various regulations such as Good Manufacturing Practices (GMP).

The global market for Active Pharmaceutical Ingredients (API), Drugs & Pharmaceutical

Products is expected to grow rapidly over the next few years. This growth will be driven by rising demand for improved healthcare services and an increasing number of new treatments. The market for active pharmaceutical ingredients is anticipated to rise at a CAGR of 5.90%. The development in the production of active pharmaceutical ingredients (APIs) as well as the increased incidence of chronic diseases including cancer and cardiovascular conditions are both responsible for the expansion. Government regulations that are supportive of API manufacturing, together with shifting geopolitical conditions, are accelerating market expansion.

The pharmaceutical products market has grown steadily in recent years, and is expected to continue to do so. This growth is driven by a number of factors, including increased demand for new drugs, changing disease patterns and aging populations in some countries, as well as

₹ 2495/- US\$ 225-



the emergence of innovative drugs and technologies. The market is being shaped by the rise of emerging economies and their increasing healthcare needs. This has led to increased investment in drug research and development, as well as an increase in the number of multinational companies setting up operations in various countries.

Furthermore, generic drugs are becoming increasingly popular as a way of reducing healthcare costs. Generic drugs are copies of brand-name drugs, which are manufactured by generic drug companies. They offer an effective alternative to branded drugs and are often much cheaper. As a result, generic drugs are increasingly being used in countries across the world, leading to an increase in the global pharmaceutical products market.

Overall, the global market for pharmaceutical products and drugs are set to continue to grow in the coming years. New products, innovative technologies and emerging markets will drive

growth, and this will bring both opportunities and challenges for the industry.

The books' main subjects include Active Pharmaceutical Ingredients (API), Drugs, Aspirin, Paracetamol, IV Fluids, Ointment, Metronidazole, Liquid Glucose, Surgical Cotton, Syrup, Tablet, Excipients, Pharmaceutical Salts with formulations, factory layout, and images of machinery with contact information for suppliers.

A thorough guide to manufacturing and business operations in the Active Pharmaceutical Ingredients (API), Drugs & Pharmaceutical Products industry. The Active Pharmaceutical Ingredients (API), Drugs & Pharmaceutical Products manufacturing industry is full with opportunity for producers, traders, and business owners, and this book is your one-stop resource for all the information you require. The only complete manual on the creation of commercial Active Pharmaceutical Ingredients (API), medications, and pharmaceutical products is this one. It offers a wealth of information on how to do things, from concept through equipment acquisition.

**A**n IV (Intravenous) Cannula, particularly the "Pen Style," is a medical device used for administering intravenous therapies. It consists of a small tube that's inserted into a vein, allowing for the direct delivery of medications, fluids, or nutrients into the bloodstream. The "Pen Style" refers to a specific design of the IV Cannula that resembles a pen for ease of handling and insertion. This design often includes features like a retractable needle, a grip that mimics a pen for better control during insertion, and a protective sheath for safety. The pen-like structure provides greater precision and comfort for the healthcare professional during the insertion process. After the cannula is in place, the needle is retracted, leaving only the flexible tube inside the vein for administering the IV treatment. This design can help reduce the risk of needlestick injuries and improve the overall experience for both the patient and the healthcare provider.

**Indian Market Prospects**

India IV cannula market stood at USD 9.19 million in 2019 and is likely to reach USD 15.42 million by the end of 2027 by registering a CAGR of 6.35 % during the forecast period, 2020-2027. The major factors are the rise in hospitalizations and the growing prevalence of chronic & lifestyle-related diseases across the country. Additionally, the surging geriatric population, increasing healthcare expenditure by the government bodies, and advanced healthcare infrastructure will spur the IV cannula industry in future periods. Furthermore, the growing demand for injectable drugs and the increasing number of surgeries coupled with investigational medical procedures like infusing medication or obtaining blood samples are expected to witness IV cannula's remarkable growth. The growing number of minimally invasive surgery (MIS) procedures and increased product bundling strategies are expected to propel the demand for IV cannula over the coming years.

**Benefits and Uses of IV Cannula (Pen Style)**

IV cannulas, particularly those designed in

a pen-style, offer several benefits and uses in medical practice. Here's an overview:

- Ease of Insertion and Use
- Portability
- Reduced Patient Discomfort
- Precision in Cannulation
- Safety Features
- Versatility in Medical Situations
- Reduced Risk of Infection
- Cost-Effectiveness
- Training and Education
- Adaptability

**Why Entrepreneur Should Start this Business?**

Starting a business in the manufacturing of Pen Style IV Cannulas offers a host of compelling opportunities. With the global healthcare sector continually advancing, the demand for innovative, patient-friendly medical devices is soaring. Capitalizing on this growing need, the Pen Style IV Cannula presents an enticing market potential. Its unique blend of patient comfort, operational efficiency, and cost-effectiveness positions it as a sought-after solution in healthcare institutions worldwide. Additionally, its minimal learning curve can ease its adoption across diverse healthcare settings, from large hospitals to small clinics. As a business owner, you have the chance to contribute significantly to improving patient experiences and care delivery efficiency while also building a profitable venture. As the healthcare landscape continues to evolve, staying at the forefront of such advancements can be both rewarding and fulfilling. The journey of transforming IV therapy and elevating patient comfort could well start with you and your business.

**Conclusion**

The Pen Style IV Cannula Manufacturing Unit offers a unique combination of commercial profitability and societal impact. The time is ripe for entrepreneurs to seize this opportunity, ride the wave of technological advancement, and contribute to revolutionizing the healthcare landscape. With the increasing need for medical interventions, products like the Pen Style IV Cannula will continue to be in demand, ensuring a steady stream of revenue for entrepreneurs.

**Start IV Cannula Manufacturing Unit (Pen Style)**

CAPACITY:	
<b>IV Cannula with Wings &amp; with Injection Port Needle 14 G</b>	<b>: 10,000 Pcs Per Day</b>
<b>IV Cannula with Wings &amp; with Injection Port Needle 16 G</b>	<b>: 8,000 Pcs Per Day</b>
<b>IV Cannula with Wings &amp; with Injection Port Needle 17 G</b>	<b>: 8,000 Pcs Per Day</b>
<b>IV Cannula with Wings &amp; with Injection Port Needle 18 G</b>	<b>: 6,000 Pcs Per Day</b>
<b>IV Cannula with Wings &amp; with Injection Port Needle 20g</b>	<b>: 6,000 Pcs Per Day</b>
<b>IV Cannula with Wings &amp; with Injection Port Needle 22 G</b>	<b>: 6,000 Pcs Per Day</b>
<b>IV Cannula with Wings &amp; with Injection Port Needle 24 G</b>	<b>: 6,000 Pcs Per Day</b>
<b>IV Cannula with Wing &amp; without Injection Port Needle 14 G</b>	<b>: 5,000 Pcs Per Day</b>
<b>Plant &amp; Machinery</b>	<b>: ₹ 1284 Lakhs</b>
<b>Cost of Project</b>	<b>: ₹ 5103 Lakhs</b>

**Setup Plant of Lithium Ion Battery (Battery Assembly)**

**A** lithium-ion or Li-ion battery is a type of rechargeable battery which uses the reversible reduction of lithium ions to store energy. It is the predominant battery type used in portable consumer electronics and electric vehicles. It also sees significant use for grid-scale energy storage and military and aerospace applications. Compared to other rechargeable battery technologies, Li-ion batteries have high energy densities, low self-discharge, and no memory effect.

**Scope for Startups in the Lithium Ion Battery Industry**

The increasing demand for energy storage solutions in the industrial, automotive, and consumer sectors have made lithium ion batteries a promising business opportunity. The low cost of these batteries makes them a viable option for entrepreneurs who want to get into the battery assembly industry. The lithium ion battery market is expected to grow significantly over the next few years due to increased adoption of renewable energy sources such as solar and wind energy. This growth presents an opportunity for startups to create innovative products and services that can capitalize on this growth. Startups can focus on developing better battery packs for electric vehicles and consumer electronics, creating more efficient charging solutions, or even launching rental programs that allow customers to rent lithium ion batteries for short-term use.

**Global Market Outlook**

The global lithium-ion battery market size was valued at USD 41.97 billion in 2021 and is expected to expand at a compound annual growth rate (CAGR) of 18.1% from 2022 to 2030. The automobile sector is expected to witness significant growth owing to the rising adoption of electric vehicles. The worldwide registration of electric vehicles is anticipated to increase significantly over the forecast period.

**Conclusion**

Lithium-ion batteries are the future of energy storage due to their numerous advantages such as high energy density, low maintenance costs, and relatively long life spans. Furthermore, lithium-ion battery assembly is a booming business that has great potential for growth and expansion in the near future.

PROJECT COST ESTIMATE	
<b>48 Volt, 60 AH Lithium-Ion Battery Pack</b>	<b>: 20 Nos per day</b>
<b>48 Volt, 80 AH Lithium-Ion Battery Pack</b>	<b>: 20 Nos per day</b>
<b>48 Volt, 100 AH Lithium-Ion Battery Pack</b>	<b>: 20 Nos per day</b>
<b>60 Volt, 20 AH Lithium-Ion Battery Pack</b>	<b>: 20 Nos per day</b>
<b>60 Volt, 30 AH Lithium-Ion Battery Pack</b>	<b>: 20 Nos per day</b>
<b>72 Volt, 20 AH Lithium-Ion Battery Pack</b>	<b>: 10 Nos per day</b>
<b>72 Volt, 40 AH Lithium-Ion Battery Pack</b>	<b>: 10 Nos per day</b>
<b>12.8 Volt, 8 AH Lithium-Ion Battery Pack</b>	<b>: 20 Nos per day</b>
<b>12.8 Volt, 12 AH Lithium-Ion Battery Pack</b>	<b>: 20 Nos per day</b>
<b>12.8 Volt, 20 AH Lithium-Ion Battery Pack</b>	<b>: 20 Nos per day</b>
<b>12.8 Volt, 30 AH Lithium-Ion Battery Pack</b>	<b>: 20 Nos per day</b>
<b>Plant &amp; Machinery</b>	<b>: ₹ 172 Lakhs</b>
<b>Cost of Project</b>	<b>: ₹ 812 Lakhs</b>
<b>Rate of Return</b>	<b>: 29%</b>
<b>Break Even Point</b>	<b>: 61%</b>

**Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :**

**NIIR PROJECT CONSULTANCY SERVICES**  
 106 E, Kamla Nagar, Delhi-110 007 (India). Tel. : 91-11- 23843955 • 23845886  
 AN ISO 9001:2015 CERTIFIED COMPANY  
 Website : www.niir.org • www.entrepreneurindia.co • E-mail : info@niir.org • npc.india@gmail.com

**S**odium Sulfide Flakes, scientifically known as Na<sub>2</sub>S. This unique compound dissolves effortlessly in water, opening up a wide array of applications and uses. Not only does it play a significant role in the pulp & paper industry, but it also stands as a pivotal player in water treatment processes, textile manufacturing, and ore flotation among others. However, as much as Sodium Sulfide Flakes are versatile and useful, they require a considerable level of caution during handling. This compound holds a corrosive personality and can produce toxic hydrogen sulfide gas when it comes into contact with acids. The bright yellow color, the flake form, and the crucial roles it plays, make Sodium Sulfide Flakes an integral player in the exciting world of chemistry.

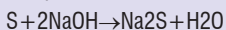
**Production of Sodium Sulfide from Sulfur and Caustic Soda**

The production of sodium sulfide (Na<sub>2</sub>S) from sulfur and caustic soda (sodium hydroxide, NaOH) involves a chemical reaction where these two substances are combined. The process can be described as follows:

**Reaction Setup:** The production process begins by preparing a reaction vessel where sulfur and caustic soda will be combined. Sulfur is typically in a solid form, while caustic soda is usually used in a concentrated aqueous solution.

**Mixing of Reactants:** Sulfur and caustic soda are then mixed together. The caustic soda solution is usually heated to increase the reaction rate. In this step, care must be taken to control the reaction conditions, such as temperature and concentration, to ensure safety and efficiency.

**Chemical Reaction:** The chemical reaction between sulfur and caustic soda can be represented by the equation:



In this reaction, sulfur reacts with sodium

**Set Up Sodium Sulfide Flakes Manufacturing Business from Sulfur and Caustic Soda**

hydroxide to form sodium sulfide and water.

**Cooling and Crystallization:** After the reaction, the mixture is cooled. Sodium sulfide, which is soluble in water, can crystallize out of the solution upon cooling.

**Separation and Purification:** The crystallized sodium sulfide is then separated from the liquid phase, typically through filtration. Additional purification steps may be required to remove impurities and achieve the desired purity level of the sodium sulfide.

**Drying and Packaging:** The purified sodium sulfide is dried and then packaged for storage and transportation.

It's important to note that the production of sodium sulfide using this method must be conducted with proper safety measures due to the caustic nature of the reactants and the potential for hazardous byproducts. Additionally, the specific conditions and equipment used can vary depending on the scale and desired purity of the sodium sulfide product.

PROJECT COST ESTIMATE CAPACITY	
Sodium Sulfide Flakes	: 10,000 MT Per Annum
Plant & Machinery	: ₹ 282 Lakhs
Cost of Project	: ₹ 1426 lakhs
Rate of Return	: 30%
Break Even Point	: 49%

**Uses and Application**

Here are some common uses and applications

of sodium sulfide flakes:

- Mining Industry
- Chemical Manufacturing
- Textile Industry
- Pulp and Paper Industry
- Water Treatment
- Leather Tanning
- Wastewater Treatment
- Photography
- Flotation in Mineral Processing
- Oil and Gas Industry

**Future of Sodium Sulfide in Industries**

The global sodium sulfide market is projected to reach around US\$ 672 million by the end of 2027, in terms of revenue, growing at CAGR of 3.4% during the forecast period (2019-2027). Sodium Sulfide is a chemical compound that is alkaline in nature when exposed to air and smells like rotten eggs. It has a wide range of application across pulp and paper industry, textile industry, water treatment, and various chemical manufacturing. Sodium sulfide is also used in the photographic industry for protecting the developer solution from being getting oxidize. It is also used to produce elastic synthetic products, sulfur colors, and leather products. The factor expected to drive the sodium sulfide market is the rise in need for clean water. Sodium sulfide is one of the compounds used treatment of water and has high demand from countries around the world. Amidst the rise in polluting water sources, the demand for treating water has grown which is expected to drive the market.

**Conclusion**

Establishing a company in Sodium Sulfide Flakes is a great way to support important societal causes in addition to earning a lot of money. A business venture in the sodium sulfide flakes industry could be your passport to a prosperous entrepreneurial journey because of its promising future, affordable production, and increasing demand.

**P**ipe fittings basically include the range of components that are used to connect pipe ends for in-line, multi-port, offset and mounting configurations. Pipe fitting cross sections are mostly, but not always, circular in shape to match with the pipe section with which they are connected. Pipes can be metallic or plastic and pipe fittings vary depending on the type of pipe used.

The plastic pipes used are predominantly PVC pipes and recent increase in use of HDPE pipes in competition for PVC pipes. The other pipes include GRP, BWSCC pipes, Hume pipes, stoneware pipes, etc. GRP pipes, RCC pipes,

**Emerging Business of Ductile Iron Pipe Fittings**

and stoneware pipes are used predominantly in sewerage applications.

The increasing share of DI pipes obviously indicates its rising acceptance by customers and its growing popularity. The increasing share of DI pipes indicates that DI pipes are gradually replacing all other pipes, especially steel pipes. The government bodies have virtually stopped purchase of CI pipes for potable water supply and the existing CI pipelines are increasingly being replaced by DI pipes. Plastic pipes and cement pipes (AC/RCC/PSC) are also being replaced in urban and semi-urban areas; however, in rural water supply schemes they still exist due to the low initial investment.

PROJECT COST ESTIMATE CAPACITY	
Capacity	: 12 MT Per Day
Plant & Machinery	: ₹ 311 Lakhs
Cost of Project	: ₹ 1135 Lakhs
Rate of Return	: 33.83%
Break Even Point	: 55.20%

Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

**NIIR PROJECT CONSULTANCY SERVICES**

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi-110 007 (India). Tel. : 91-11- 23843955 • 23845886

Mob.: +91-9097075054 • 8800733955

Website : www.niir.org • www.entrepreneurindia.co • E-mail : info@niir.org • npc.s.india@gmail.com



# Start Production of Methylaniline

**M**ethylaniline is a clear to pale yellow liquid with a distinctive, strong fishy odor. Its structure consists of a benzene ring attached to an amino group (-NH<sub>2</sub>), and a methyl group (-CH<sub>3</sub>) which is linked to the nitrogen atom of the amino group. This unique structure gives methylaniline some interesting properties that make it a key player in various chemical processes. On a molecular level, methylaniline can undergo various reactions due to the presence of its amino group and aromatic ring. This means it can participate in several chemical syntheses, acting as an essential building block for more

### PROJECT COST ESTIMATE

#### CAPACITY

Methylaniline	: 40 MT Per Day
Plant & Machinery	: ₹ 730 Lakhs
Cost of Project	: ₹ 2056 Lakhs
Rate of Return	: 53%
Break Even Point	: 47%

complex structures. But methylaniline isn't just all about its scientific significance. It is an industrially important compound. It serves as a critical component in the production of various dyes and pharmaceuticals, pesticides, and rubber chemicals. Given its wide range of applications and ever-increasing demand, methylaniline is making its mark in the chemical industry, and for good reason.

#### Uses of Methylaniline

- Dye and Pigment Industry
- Pharmaceuticals
- Rubber Industry
- Chemical Research
- Corrosion Inhibitors
- Agrochemicals
- Chemical Analysis

#### Global Market Outlook

The worldwide market for n-Methylaniline is thriving, much like its chemical cousin. Its unique role as an antioxidant in gasoline, combined with its applications in the manufacturing of dyes, pharmaceuticals, and agrochemicals, ensures a steady global demand. Rapid industrialization, especially

in developing regions like Asia-Pacific, has resulted in a booming market for n-Methylaniline. As countries industrialize, their requirement for gasoline and chemical products surge, driving the demand for n-Methylaniline. Additionally, the established markets in North America and Europe, backed by their strong chemical industries, provide stability. An emerging trend to note is the potential application of n-Methylaniline in eco-friendly processes. As industries shift towards sustainability, n-Methylaniline could find new opportunities for growth. However, it's important to remember that handling n-Methylaniline comes with certain health risks, and regulations are strict. Nevertheless, with the right safety practices and a focus on innovation, the global n-Methylaniline market has a bright outlook.

#### Conclusion

Stepping into the methylaniline business comes with the potential of high returns, market diversification, and international expansion opportunities. The ride might be a bit challenging at first, but with a well-devised strategy and deep understanding of the market, the methylaniline business could be the next big entrepreneurial venture to explore.

**R**ecycling of lithium-ion batteries refers to the process of recovering valuable materials from used or discarded lithium-ion batteries so that they can be reused in the production of new batteries or other products.

### Why to Start Recycling of Lithium Ion Battery Business?

Starting a recycling business for lithium-ion batteries can be a promising venture for several compelling reasons:

**1. Environmental Concerns:** Recycling helps prevent the improper disposal of batteries, reducing the risk of toxic chemicals leaking into the environment and polluting soil and water.

**2. Resource Conservation:** Lithium, cobalt, nickel, and other materials used in lithium-ion batteries are finite resources. Recycling these materials from spent batteries helps conserve these valuable resources, reducing the need for new mining and extraction, which can be ecologically damaging and resource-intensive.

**3. Market Growth:** As the adoption of electric vehicles and renewable energy sources continues to rise, the demand for lithium-ion batteries is expected to increase. This growth provides a growing supply of spent batteries, creating a sustainable source of raw materials for recycling businesses.

**4. Economic Opportunities:** The lithium-ion battery recycling industry offers economic opportunities, including job creation, technological innovation, and potential partnerships with battery manufacturers and electric vehicle companies.

**5. Sustainable Energy Transition:** By enabling

## A Business Plan for Recycling of Lithium Ion Battery

the recycling of lithium-ion batteries, your business can contribute to a more sustainable energy transition, reducing the carbon footprint associated with battery production and disposal.

**6. Technological Advancements:** Continuous advancements in recycling technologies have made it more efficient and cost-effective to recover valuable materials from lithium-ion batteries, making it an attractive business proposition.

Starting a lithium-ion battery recycling business requires careful planning, investment in technology, compliance with regulations, and building a network of suppliers and customers. However, the potential environmental and economic benefits make it a compelling opportunity in today's green-focused economy.

#### Applications: Lithium-ion batteries

Lithium-ion (Li-ion) batteries have become increasingly popular due to their numerous applications. Here are some of the key applications of lithium-ion batteries:

- Portable Electronics
- Electric Vehicles (EVs)
- Renewable Energy Storage
- Power Tools
- Uninterruptible Power Supplies (UPS)
- Aerospace and Aviation
- Medical Devices

#### Global Market outlook

The global lithium ion battery recycling market size was valued at USD 3.22 billion in 2022. The market size is projected to grow from USD 3.79 billion in 2023 to USD 14.89 billion by 2030, exhibiting a CAGR of 21.6% during the forecast period. The recycling process of li-ion batteries is utilized to extract and sell the raw materials accumulated in the electrode composition to lower the overall project cost and reduce the environmental impact. These factors will help the lithium ion battery recycling market grow. The rise in popularity of electric vehicles is one of the main driving factors for lithium ion battery recycling industry.

#### Conclusion

You have a perfect storm for industry expansion. Lithium-ion battery recycling is a thriving business that combines sustainability, technology, and economics, making it a hub of opportunity and innovation. So, while we continue to power our lives with lithium-ion batteries, rest certain that their recycling will keep up, transforming what was once 'waste' into wealth and doing the planet a world of good in the process!

### PROJECT COST ESTIMATE

#### CAPACITY:

Copper	: 408 MT Per Annum
Aluminium	: 240 MT Per Annum
Graphite	: 528 MT Per Annum
Carbon Black	: 96 MT Per Annum
Lithium Cobalt Oxide	: 744 MT Per Annum
Plastic	: 72 MT Per Annum
Plant & Machinery	: ₹ 189 Lakhs
Cost of Project	: ₹ 468 Lakhs
Rate of Return	: 28%

**Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :**

### NIIR PROJECT CONSULTANCY SERVICES

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamlia Nagar, Delhi-110 007 (India). Tel. : 91-11- 23843955 • 23845886

Mob.: +91-9097075054 • 8800733955

Website : [www.niir.org](http://www.niir.org) • [www.entrepreneurindia.co](http://www.entrepreneurindia.co) • E-mail : [info@niir.org](mailto:info@niir.org) • [npcs.india@gmail.com](mailto:npcs.india@gmail.com)

## Start Manufacturing of Disposable Plastic Syringes

**S**ingle-use disposable plastic syringes are specifically intended to prevent the possibility of cross-contamination between patients. These syringes are made of a lightweight, easy-to-use plastic barrel and come with a precision-fit plunger and a hypodermic needle. Each syringe is sanitized and separately packaged for single use, ensuring that it is free of contamination until it is needed. Once used, it is disposed of properly, eliminating the possibility of infection spreading through the syringe. Disposable plastic syringes are more than simply a useful tool; they are an essential component of the machinery that keeps patients safe and well-cared for.

### The Rising Demand in the Health Sector

Over the past several years, the healthcare industry has undergone numerous transformations, and disposable plastic syringes have been at the heart of this change. The one-time-use design of these syringes greatly minimizes the potential for transmission of infections, a feature that is incredibly attractive in the healthcare field where patient safety is paramount. With their capability to safeguard patients while delivering necessary medical care, disposable plastic syringes have become an irreplaceable part of the health sector. Their popularity continues to rise, not just due to the critical role they play in infection control, but also because of their versatility and adaptability to various medical procedures.

### Advantages of Disposable Plastic Syringes

Disposable plastic syringes offer

several advantages in medical and healthcare settings:

- Sterility
- Cost-effectiveness
- Convenience
- Reduced risk of cross-contamination
- Accurate dosing
- Variety of sizes and types
- Safety features
- Single-use design
- Accessibility
- Compliance with regulations

### Global Market Outlook

The global disposable syringes market size was estimated at USD 14.18 billion in 2022 and is anticipated to grow at a compound annual growth rate (CAGR) of 6.2% from 2023 to 2030. The market is primarily driven by factors, such as an increase in technological advancements and a rise in the incidence of chronic diseases. Moreover, the increasing adoption of safety syringes and the rising prevalence of diabetes drive market growth. The rising cases of chronic diseases and an increasing number of vaccinations that make extensive use of syringes, such as single-use and disposable syringes, are enhancing global market growth.

### Conclusion

The disposable plastic syringes market is a lucrative one that is expected to flourish due to its inherent alignment with healthcare trends and technological advancements. As this potent business venture continues to thrive, it simultaneously contributes to better patient care—a win-win scenario for all stakeholders involved.

### PROJECT COST ESTIMATE

#### CAPACITY:

<i>Disposable Plastic Syringes 1 ml Size</i>	: 25,000 Nos Per Day
<i>Disposable Plastic Syringes 2 ml Size</i>	: 25,000 Nos Per Day
<i>Disposable Plastic Syringes 3 ml Size</i>	: 25,000 Nos Per Day
<i>Disposable Plastic Syringes 5 ml Size</i>	: 25,000 Nos Per Day
<i>Disposable Plastic Syringes 10 ml Size</i>	: 25,000 Nos Per Day
Plant & Machinery	: ₹ 245 Lakhs
Cost of Project	: ₹ 1811 Lakhs
Rate of Return	: 29%
Break Even Point	: 37%

## Manufacturing Business of Bamboo Charcoal

**B**amboo charcoal production is a great business to start since it has high profit margins, requires few expensive inputs, and can be set up in a short amount of time. Furthermore, bamboo charcoal can be provided to customers in a variety of forms, such as briquettes and wood chunks, obviating the need for any middlemen or manufacturers in the supply chain. In a nutshell, this is the future of business! Let's take a look at how you may get started making bamboo charcoal right now.

### Market Predictions:

From 2021 to 2026, the value of the bamboo charcoal market is expected to increase by USD 2.33 billion, with a CAGR of 19.35 percent. The bamboo charcoal market is mostly driven by factors such as

### PROJECT COST ESTIMATE CAPACITY

Capacity	: 4 MT Per Day
Plant & Machinery	: ₹ 40 Lakhs
Cost of Project	: ₹ 200 Lakhs
Rate of Return	: 26%
Break Even Point	: 56%

rising demand for natural charcoal.

The bamboo charcoal powder market is segmented into culinary, medicinal, cosmetics, and other applications. Chemicals, labs, and agriculture are among the other segments. Different grades of bamboo charcoal powder are utilised in industries depending on their needs. In terms of application, the bamboo charcoal powder market is dominated by the culinary, medicinal, and cosmetics industries.

## Floral Foam Production Business

**F**loral foam is a porous, thick, yet lightweight material that can be cut into nearly any shape. It holds its shape when wet and provides both water and support for cut flower arrangements. Floral foam's density allows it to hold a lot of water, allowing flowers to last longer. It also increases the stability of the flower stems, allowing you more control over your floral arrangements. The first appearance of floral foam was as a green block. It's currently available in a number of colours and shapes, such as spheres, crosses, and wreaths, to meet a wide range of arranging needs.

In India, floriculture is considered a high-growth industry. Commercial floriculture is becoming increasingly important in terms of export. The liberalisation of industrial and trade policies made it possible for cut flower export production to expand. The Indian floriculture market was worth INR 157 billion in 2018. From 2019

### PROJECT COST ESTIMATE CAPACITY

Capacity	: 24000 Pcs. Per Day
Plant & Machinery	: ₹ 74 Lakhs
Cost of Project	: ₹ 321 Lakhs
Rate of Return	: 30%
Break Even Point	: 50%

to 2024, the market is estimated to grow at a CAGR of 20.1 percent, reaching INR 472 billion. Floriculture, sometimes known as flower farming, is the practise of cultivating flowering and appealing plants.

As a result of globalisation, floriculture has become one of the most important commercial activities in Indian agriculture. The Indian floriculture industry includes the florist trade, nursery plants, bulb and seed production, as well as the fabrication of micro propagation material and the extraction of essential oils from flowers. The industry has risen at a compound annual growth rate of 25% during the last decade (CAGR).

**Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :**

### NIIR PROJECT CONSULTANCY SERVICES

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi-110 007 (India). Tel. : 91-11- 23843955 • 23845886

Mob.: +91-9097075054 • 8800733955

Website : [www.niir.org](http://www.niir.org) • [www.entrepreneurindia.co](http://www.entrepreneurindia.co) • E-mail : [info@niir.org](mailto:info@niir.org) • [npcs.india@gmail.com](mailto:npcs.india@gmail.com)

## E-Waste & Lithium Battery Recycling Plant

Electronic Waste – or e-waste – is the term used to describe old, end-of-life electronic appliances such as computers, laptops, TVs, DVD players, mobile phones, mp3 players etc. Technically, electronic "waste" is the component which is dumped or disposed or discarded rather than recycled, including residue from reuse and recycling operations.

Recycling of used lithium batteries has primarily focused on extracting active metal cobalt (Co) and lithium (Li).

According to E-Waste Market in India 2015-2019 research, the need to prevent biological hazards is one of the major trends upcoming in this market. Indians become richer and spend more on electronic items and appliances, computer equipment accounts for almost 70% of e-waste material, followed by telecommunication equipment (12%), electrical equipment (8%) and medical equipment (7%). Other equipment, including household account for the remaining 4%. As a whole any entrepreneur can venture in this project without risk and earn profit.

### PROJECT COST ESTIMATE CAPACITY

<b>E-Waste &amp; Lithium Battery Recycling Plant</b>	<b>: 20 MT/Day</b>
<b>Plant &amp; Machinery</b>	<b>: ₹ 225 Lakhs</b>
<b>Cost of Project</b>	<b>: ₹ 540 Lakhs</b>
<b>Rate of Return</b>	<b>: 26%</b>
<b>Break Even Point</b>	<b>: 59%</b>

## Moringa Oleifera (Drumstick) Powder

**M**oringa Oleifera is the most widely cultivated species of the genus Moringa, which is the only genus in the family Moringaceae. English common names include: moringa, drumstick tree (from the appearance of the long, slender, triangular seed-pods), horseradish tree (from the taste of the roots, which resembles horseradish), ben oil tree, or benoil tree (from the oil which is derived from the seeds).

Originated from India, moringa trees are now found in Ghana, the Philippines, Nigeria, Kenya, Rwanda, Niger, Mozambique, Cambodia and Haiti. Today, the moringa market globally is estimated at more than Rs 27,000 crore, which is expected to cross Rs 47, 250 crore by 2020, growing at a rate of nine per cent per year.

The increasing awareness about the health advantages of moringa products

will be one of the major factors that will have a positive impact on the global moringa products market during the forecast period. Over the years, moringa products such as moringa leaf powder have seen a growth in the sales in the global market. The rising health awareness in countries such as Europe and Americas have given rise to the increasing usage of moringa products by the consumers. This will drive the moringa products market future growth till 2022. As a whole any entrepreneur can venture in this project without risk and earn profit.

### PROJECT COST ESTIMATE CAPACITY

<b>Drumstick (Moringa Oleifera) Powder</b>	<b>: 400 Kgs / Day</b>
<b>Plant &amp; Machinery</b>	<b>: ₹ 31 Lakhs</b>
<b>Cost of Project</b>	<b>: ₹ 71 Lakhs</b>
<b>Rate of Return</b>	<b>: 29%</b>
<b>Break Even Point</b>	<b>: 71%</b>

## PP Woven Bags (For Cement Packing)

### Profile

PP woven sacks laminated with PP liner have wider applications. PP woven sacks are much stronger & can withstand much higher impact loads because of PP strips elongation at break is about 15-25% as compared to 30% of Jute. These sacks are much cleaner & resist fungal attack. PP Woven Sacks can be unlined, laminated and along with PE liners. The size range for bags made from tubular fabric is from minimum 24 inches (60 cm.) upto 61 inches (155 cm). Woven Sacks are the best and the most cost effective packaging solution for Industries like Cement, fertilizer, sugar, chemicals, food grains etc. off late Woven fabric, which is the first stage of Woven sacks, is a preferred medium for bale wrapping and rain protection in the form of Tarpaulin.

### Salient Features:

- Flexible and high strength
- Double side print
- Water & dust proof design
- Heat/Wave Cut & hemmed top

- Flat or anti-slip weaving

### Applications

PP woven bags and PP woven sacks with liners are specially designed for the packaging of pulverous & force flowing materials, which include the following:

- Food Products: Flour, Corn, Grain, Sugar, Salt, Animal Feed
- Chemicals & Fertilizers: Carbon, Caustic Soda, Potash, Phosphates
- Petro-chemicals: Polymers, Granules, PVC Compound, Master Batches
- Minerals: Cement, Calcium Carbonate, Lime, Sand

### Advantages of PP Woven Bags

Woven bags and sacks of PP offer several advantages over other industrial packaging material. Some of the advantages are:

1. Moisture Proof: PP Bags are inherently moisture repellent
2. Light Weight: PP Bags being lightweight, offers easy and cheap transportation.
3. Printing: Bright 2/3/4 Colour printing offers aggressive marketing prospects
4. Stackability: No problems in stacking. Can be gusseted to further improve stacking
5. Strength: High Tensile strength and long life.

6. Economical: Highly economical compared to other alternative packing material
7. Seepage: No Seepages especially in paper lined bags

### Market Scenario

Woven bags enjoy a good market in India and will continue to do so in the coming years. Plastic woven sacks are rapidly replacing jute bags because they have often various advantages over the conventional jute fabrics as packaging materials. They have excellent chemical resistance; they are light in weight and more suitable for packing of various chemicals in the form of granules and powder. They are also: stronger and can withstand much higher impact loads. Their elongation at break is 15 to 25 per cent compared to 3 per cent for jute; they are much cleaner, both in use and production and can be used to handle food products as they are resistant to fungal attack. Because of such superior properties of plastic woven bags, it has high demand everywhere. Cement industry is increasing day by day.

### PROJECT COST ESTIMATE CAPACITY

<b>Capacity</b>	<b>: 1 Lakh Nos./day</b>
<b>Plant and Machinery</b>	<b>: ₹ 171 Lakhs</b>
<b>Cost of Project</b>	<b>: ₹ 561 Lakhs</b>
<b>Rate of return</b>	<b>: 47%</b>
<b>Break Even Point</b>	<b>: 49%</b>

**Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :**

**NIIR PROJECT CONSULTANCY SERVICES**

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi-110 007 (India). Tel. : 91-11- 23843955 • 23845886

Mob.: +91-9097075054 • 8800733955

Website : www.niir.org • www.entrepreneurindia.co • E-mail : info@niir.org • npc.s.india@gmail.com



## Investment Opportunities in Waste Lubricating Oil Recycling Plant

**W**aste oil is made up mostly of hydrocarbons and comes from both industrial and non-industrial sources. Due to physical contamination and chemical reactions that occur during its use, it may potentially contain additives and contaminants. Used oil has been used before, and as a result, it is now contaminated with chemical and physical contaminants. Old transmission oil, motor oil, brake fluid, hydraulic oil, and gearbox oil are all examples of used oil. Oil that has been used is a recyclable commodity that can be held for recycling, reuse, or disposal. Oil that has been used is not considered a waste product. By interposing a thin coating of oil between metallic surfaces, lubricating lubricants are widely employed in industries to minimise friction and wear. Impurities such as water, salt, dirt, metal scrapings, broken down additive components, varnish, and other elements might mix with the oil or be created in it as a result of thermal breakdown or oxidation during regular use.

It is preferred to recycle and reuse spent oil rather than dispose of it, and it can have significant environmental benefits. Recycled spent oil can be refined into fresh oil, processed into fuel oils, and used as petroleum industry raw materials. The term "waste oil" refers to refined oil that has been delivered to be used for a number of applications. Waste oil contains a variety of impurities, grime, and chemicals. Any synthetic or petroleum-based oil that has become polluted and unfit for its original purpose is referred to as waste oil. Crankcase and lubricant wastes are the main sources of this substance. It's also used as a road oil for dust control, and it's sometimes blended with pure oil for use in boilers to generate electricity.

In many regions, the method of refining waste oil to make fuel or lubricating oil is currently used. Because it is burned or haphazardly dumped into the earth, waste oil appears to be a harm to the environment. Refining waste oil necessitates the development of efficient recycling and disposal strategies by government bodies. This helps to protect the environment by preventing unlawful waste oil dumping. Emerging waste oil treatment and disposal solutions provide for more efficient servicing while also reducing environmental risk.

### PROJECT COST ESTIMATE

**CAPACITY:**

<b>Used Lubricating Oil</b>	<b>: 20,000 Ltrs Per Day</b>
<b>Spent Clay as by product</b>	<b>: 2,105 Ltrs Per Day</b>
<b>Plant &amp; Machinery</b>	<b>: ₹ 127 Lakhs</b>
<b>Cost of Project</b>	<b>: ₹ 753 Lakhs</b>
<b>Rate of Return</b>	<b>: 27%</b>
<b>Break Even Point</b>	<b>: 50%</b>

## WPC Profile for Building Materials Like Door and Window Frame and Shutters

**W**PCs are composites containing a wood component in particle form (wood particles/wood flour) and a polymer matrix. They are used in a variety of structural and non-structural applications ranging from component and product prototyping to outdoor decking. Wood plastic composites (WPCs) are roughly 50:50 mixtures of thermoplastic polymers and small wood particles. The wood and thermoplastics are usually compounded above the melting temperature of the thermoplastic polymers and then further processed to make various WPC products.

The wood-plastic composites market is projected to reach US\$ 2.6 bn in 2012. Analysts anticipate the market to expand at a CAGR of 10.80% during the period from 2013 to 2019 and attain a value USD 5.84 Billion by 2021, at a CAGR of 12.4% from 2016 to 2021. Market is poised to grow at a CAGR of around 13.2% over the next decade to reach approximately \$9.7 billion by 2025. This facilitates the development of new technologies and ensures a high quality product.

### PROJECT COST ESTIMATE

**CAPACITY**

<b>WPC Profile for Building Materials</b>	<b>: 9600 Kgs/Day</b>
<b>Plant &amp; Machinery</b>	<b>: ₹ 155 Lakhs</b>
<b>Cost of Project</b>	<b>: ₹ 737 Lakhs</b>
<b>Rate of Return</b>	<b>: 28%</b>
<b>Break Even Point</b>	<b>: 64%</b>

**P**arks, community halls, libraries, commercial complexes, banks, and post offices are all available in the Industrial Park. An "Industrial Park" in India refers to a project in which plots of developed space or built-up space, in combination with common facilities and high-quality infrastructure, are established and made available to units for the purposes of industrial or commercial activity.

Historically, there have been two reasons for industrial parks. First, providing functioning infrastructure in a geographically constrained location is significantly easier to plan, especially for governments with delivery constraints. Second, the concentration of firms can have significant spillover effects both inside and outside the park, such as information spillovers, such as knowledge and technology; enterprise specialization and division of labour; the development of skilled labour markets; and the development of markets surrounding the parks.

The integrated park is made up of clusters of homes and commercial businesses that are connected by roadways, convenience stores, water treatment plants, and drainage and sewage services. With cities becoming increasingly crowded and lacking future

## Setup an Industrial Park

development potential, integrated parks have been highlighted as a viable option.

The ideal urbanization option is an integrated park. In terms of economic and societal factors, convenience is the primary goal. An Integrated Industrial Park combines residential and working opportunities in one location. Residential, infrastructure, and basic utilities, as well as job possibilities, are all available in one location.

### PROJECT COST ESTIMATE

**CAPACITY:**

<b>Type 1 Industrial Plots Area 500 sq.mt. Size</b>	<b>: 90 Nos.</b>
<b>Type 2 Industrial Plots Area 1000 sq.mt. Size</b>	<b>: 40 Nos.</b>
<b>Type 3 Industrial Plots Area 2000 sq.mt. Size</b>	<b>: 20 Nos.</b>
<b>Type 4 Industrial Plots Area 5000 sq.mt. Size</b>	<b>: 8 Nos.</b>
<b>Residential Apartment 2 BHK 112.42 sq.mt. Size</b>	<b>: 225 Nos.</b>
<b>Residential Apartment 3 BHK 161.9 sq.mt. Size</b>	<b>: 288 Nos.</b>
<b>Plant &amp; Machinery</b>	<b>: ₹ 329 Lakhs</b>
<b>Cost of Project</b>	<b>: ₹ 30642 Lakhs</b>
<b>Rate of Return</b>	<b>: 26%</b>
<b>Break Even Point</b>	<b>: 18%</b>

**Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :**

**NIIR PROJECT CONSULTANCY SERVICES**

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi-110 007 (India). Tel. : 91-11- 23843955 • 23845886

Mob.: +91-9097075054 • 8800733955

Website : [www.niir.org](http://www.niir.org) • [www.entrepreneurindia.co](http://www.entrepreneurindia.co) • E-mail : [info@niir.org](mailto:info@niir.org) • [npcs.india@gmail.com](mailto:npcs.india@gmail.com)

## NAME OF BOOKS

₹ / US\$

### CHEMICALS, FINE CHEMICALS, VITAMINS, AMINO ACIDS AND PROTEINS

- Handbook on Chemical Industries (Alcohol Based) ..... 750/- 100
- Industrial Chemicals Technology Handbook ..... 1100/- 125
- The Complete Technology Book on Chemical Industries..... 975/- 100
- Handbook on Manufacture of Acetophenone, Alcohols, Allethrin, Anthracene, Barium Potassium Chromate Pigment, Calcium Cyanamide, Carboxymethylcellulose, Carotene, Chlorophyll, Chemicals from Acetaldehyde, Fats, Milk, Oranges, Wood, Manufacture of Dye Intermediates and Dyes, Fine Chemicals, Formaldehyde, Granulated Fertilizers, Granulated Triple Superphosphate and Hydroquinone ..... 1100/- 125
- Handbook on Fine Chemicals, Vitamins, Amino Acids And Proteins ..... 1450/- 150
- Detailed Project Profiles on 9 Selected Chemical Industries (2nd Revised Edition) # ..... 1995/- 150
- Detailed Project Profiles on Chemical Industries (Vol II) (2nd Revised Edition) # ..... 1695/- 150
- The Complete Book on Non Ferrous and Precious Metals with Electroplating Chemicals..... 1975/- 200
- Modern Technology of Industrial Chemicals ..... 1100/- 125
- The Complete Technology Book on Fine Chemicals ..... 1100/- 125

### PHARMACEUTICAL, DRUGS, API

- Drugs & Pharmaceutical Technology Handbook ..... 1075/- 125
- Business Ideas for Startup in Drugs & Pharmaceutical Industry with Project Profiles (L-Ascorbic Acid (Plain), Pharmaceutical Unit, Ciprofloxacin Hydrochloride, Paracetamol, Paracetamol (BP/IP/USP Grade), Sterile Water for Injection, Active Pharma Ingredients Metformin and Ciprofloxacin, IV Fluid (BFS Technology) 3rd Edition # ..... 2595/- 225
- Handbook on Active Pharmaceutical Ingredients (API), Drugs & Pharmaceutical Products (Paracetamol, Aspirin, IV Fluids, Ointment, Metronidazole, Liquid Glucose, Surgical Cotton, Syrup, Tablet, Excipients, Pharmaceutical Salts with Manufacturing Process, Machinery Equipment Details and Factory Layout) ..... 2495/- 225

### PESTICIDES, INSECTICIDES

- The Complete Technology Book on Pesticides, Insecticides, Fungicides and Herbicides (Agrochemicals) with Formulae, Manufacturing Process, Machinery & Equipment Details (2nd Rev. Edn.) ..... 1875/- 150
- Biopesticides Handbook ..... 1575/- 150

### STARCH & ITS DERIVATIVES

- The Complete Technology Book on Starch & Its Derivatives .. 1100/- 125

### WAX & POLISHES

- The Complete Technology Book on Wax and Polishes ..... 1895/- 200
- Wax Polishes Manufacturing Handbook with Process and Formulae (Automobile, Industrial, Leather, Furniture, Floor, Marine, Metal and Shoe Polish) ..... 1675/- 150

### JUTE & COIR PRODUCTS

- The Complete Book on Jute & Coir Products (With Cultivation & Processing) 2nd Rev. Edn. .... 1575/- 150
- Handbook on 100% Export Oriented Jute & Jute Products (Eco Friendly Projects) # ..... 695/- 100

### BIO-TECHNOLOGY, NANOTECHNOLOGY, ENZYMES, FOOD BIO-TECHNOLOGY, VERMICULTURE, VERMICOMPOST, BIO-FERTILIZER, ORGANIC FARMING, BIOGAS, MUSHROOM

- Bio -Technology Handbook ..... 1100/- 125
- Plant Biotechnology Handbook ..... 1100/- 125
- Hand Book on Projects in Export Thrust Area with International Market Survey (Bio-Tech & Pharmaceutical Technology) # .... 1095/- 100
- Biotech & Pharmaceutical Handbook # ..... 1895/- 200
- Enzymes Bio -Technology Handbook ..... 1100/- 125
- The Complete Book on Biotechnology Based Bulk Drugs ..... 1050/- 125
- Handbook on Food Bio-Technology (Extraction, Processing of Fruits, Vegetables and Food Products) 2nd Revised Edition.... 1495/- 150
- Handbook on Plants and Cell Tissue Culture ..... 1275/- 125
- The Complete Technology Book on Vermiculture and Vermicompost (Earthworm) with Manufacturing Process, Machinery Equipment Details & Plant Layout (3rd Edn.) ..... 1275/- 125
- The Complete Technology Book on Biofertilizer and Organic Farming (Potash, Greenhouse Farming, Hydroponic Farming, Pellet Fertilizer, Seaweed Fertilizer, Biogas with Manufacturing Process, Machinery Equipment Details) (3rd Edition) ..... 1895/- 150
- Handbook on Mushroom Cultivation and Processing (With Dehydration, Preservation and Canning) ..... 1275/- 125
- The Complete Book on Organic Farming and Production of Organic Compost (2nd. Rev. Edn.) ..... 1575/- 150
- Nanotechnology Handbook ..... 1675/- 150

# Limited Edition—only photostat copy available

## NAME OF BOOKS

₹ / US\$

- Nanoscience and Nanotechnology Handbook ..... 1675/- 150
- Manufacture of Biofertilizer and Organic Farming..... 975/- 100
- Integrated Organic Farming Handbook ..... 1275/- 125
- Handbook on Organic Farming and Processing ..... 1275/- 125
- Handbook on Small & Medium Scale Industries (Biotechnology Products) .. 1695/- 150

### BIOGAS AND INDUSTRIAL GASES

- The Complete Book on Industrial Gases (Acetylene, Argon, Butane, Butene, Carbon Dioxide, Carbon Monoxide, Ethane, Ethene, Helium, Hydrogen Chloride, Hydrogen, Krypton, Liquefied Natural Gas (LNG), Methane, Neon, Nitrogen, Nitrogen Trifluoride Gas, Nitrous Oxide, Oxygen, Ozone, Propane, Propene, Refrigerant Gases, Sulphur Dioxide Gas, Sulphur Hexafluoride Gas, Xenon, Gas Mixtures with Machinery Equipment Details and Factory ..... 2495/- 250
- Handbook on Biogas and It's Applications (from Waste & Renewable Resources with Engineering & Design Concepts) 2nd Revised Edition ..... 1175/- 125

### FERTILIZER, BIOFUEL

- Handbook on Biofuel, Ethanol and Bioenergy Based Products (Ethanol as Biofuel, Methane Gas, Biodiesel, Biogas, Biomass Gasification, Bio-Chemical, Renewable Energy, Clean-Energy, Activated Carbon, Agricultural Residues, Forestry Residues, Animal Waste, Wood Wastes, Industrial Wastes, Municipal Solid Wastes and Sewage with Machinery, Manufacturing Process, Equipment Details and Plant Layout) ..... 1875/- 150
- Fertilizers Manufacturing Handbook (Ammonium Sulfate, Diammonium Phosphate (DAP), Urea-Ammonium Nitrate, Neem Coated Urea, N.P.K. Complex Fertilizers, Single Superphosphate (SSP), Triple Superphosphate, Zinc Sulfate Monohydrate, Magnesium Sulfate with Manufacturing Process, Machinery Equipment Details & Factory Layout) ..... 2795/- 200

### BIOPLASTIC, BIODEGRADABLE

- Bioplastics & Biodegradable Products Manufacturing Handbook (Bioplastic Carry Bags, Bio-PET, Bioplastic Drinking Straws, Corn and Rice Starch-Based Bioplastics, Food Packaging Applications, Cassava Bags, Biodegradable Tableware, Biodegradable Plates, Biodegradable Toilet Paper, Starch Based Biodegradable Plastics, Polylactic Acid (PLA)) ..... 1575/- 150
- Handbook on Biodegradable Plastics (Eco-Friendly Plastics) ... 600/- 100
- The Complete Book on Biodegradable Plastics and Polymers (Recent Developments, Properties, Analysis, Materials & Processes) ..... 1275/- 125

### PRINTING, PACKAGING, PRINTING INK

- Handbook on Modern Packaging Industries (2nd Rev. Edn.).. 1675/- 150
- Modern Technology of Printing & Writing Inks (2nd Rev. Edn.) .. 1475/- 150
- The Complete Technology Book on Printing Inks ..... 1000/- 100
- Handbook on Printing Technology (Offset, Flexo, Gravure, Screen, Digital, 3D Printing with Book Binding and CTP) (5th Revised Edition) ..... 1875/- 150
- Screen Printing Technology Handbook ..... 1000/- 100
- Modern Printing Technology ..... 250/- 50
- The Complete Book on Printing Technology with Process Flow Diagrams, Plant Layouts and Machinery Details (Offset, Gravure, Flexographic, Security, Web Offset and Pad Printing) 2nd Rev. Edn. .... 1695/- 150

### PAPER, PULP & PAPER CONVERSION

- Modern Technology of Pulp, Paper and Paper Conversion Industries ..... 1000/- 100
- The Complete Technology Book on Pulp & Paper Industries.. 1100/- 125
- Handbook on Pulp and Paper Processing ..... 1875/- 150

### VEGETABLES, SPICES, AGRO BASED, CEREAL FOOD, MILK, PLANTATION, FARMING, FOOD & BEVERAGES, FRUITS, DAIRY, OILS & FATS, FISHERIES, MEAT, COCONUTS, SUGARCANE, TEA CULTIVATION & PROCESSING

- Cultivation of Fruits, Vegetables and Floriculture ..... 1100/- 125
- Cultivation of Tropical, Subtropical, Vegetables, Spices, Medicinal and Aromatic Plants ..... 1075/- 125
- Tropical, Subtropical Fruits and Flowers Cultivation ..... 1075/- 125
- Food Packaging Technology Handbook (Biodegradable Films, Materials, Polymers, Aseptic Packaging, Labels and Labelling, Packaging of Cashew Nuts, Dairy Products, Milk, Fish, Meat, Shrimps, Canning of Vegetables, Fruits with details of Machinery and Equipments) 3rd. Rev.Edn..... 1895/- 200
- Modern Technology on Food Preservation (2nd Rev. Edn.).... 1275/- 125
- Modern Technology of Food Processing & Agro Based Industries (Confectionery, Bakery, Breakfast Cereal Food, Dairy Products, Sea Food, Fruits & Vegetable Processing) with Project Profiles (3rd Rev. Edn.) ..... 1775/- 150
- Modern Technology of Agro Processing & Agricultural Waste Products.... 975/- 100
- Handbook on Agro Based Industries (Garlic Oil and Powder, Biomass Briquettes from Bio Waste, Moringa Oleifera (Drumstick) Powder, Dehydrated Onion, Aloe Vera Gel and Powder, Cashew Nut Shell Oil and Cardanol, Rice Powder, Puttu and Wheat Powder, Fructose Syrup from Broken Rice, Potato Powder, Granules and Pellets, Rice Flakes and Puffed Rice, Cashew Nut Processing Unit, Banana, Onion, Orange and Tomato Powder & Disposable Plate and Cups from Waste Rice Husk Powder) 3rd Edition # ..... 1775/- 150
- Handbook on Spices ..... 975/- 100
- Modern Technology of Oils, Fats & Its Derivatives (2nd Rev. Edn.) .. 1875/- 150



## NAME OF BOOKS

₹ / US\$

- Detailed Project Profiles on Dairy & Dairy Products (Dairy Industry, Dairy Packaging, Dairy Farming & Dairy Products, Chocolate Confectionery Plant, Cheese Analogue, Milk Processing, Skimmed Milk Powder & UHT Milk Plant) 3rd Revised Edition # ..... 2595/- 225
- Profitable Agro Based Projects with Project Profiles (Cereal Food Technology) (2nd Revised Edition) # ..... 1895/- 150
- Modern Technology of Milk Processing & Dairy Products (4th Rev. Edn.) 1475/- 150
- The Complete Technology Book on Dairy & Poultry Industries with Farming & Processing (2nd Rev. Edn.) ..... 1275/- 125
- Handbook on Drying, Milling and Production of Cereal Foods (Wheat, Rice, Corn, Oat, Barley and Sorghum Processing Technology) (2nd. Rev. Edn.) ..... 1295/- 125
- The Complete Book on Spices & Condiments (With Cultivation, Processing & Uses) (2nd Rev. Edn.) ..... 2275/- 200
- The Complete Book on Coconut & Coconut Products (Coconut Cultivation, Manufacturing Process of Coconut Oil, Desiccated Coconut, Coconut Powder, Coconut Milk, Coconut Milk Powder, Coconut Chips, Coconut Water, Vinegar, Activated Carbon, Coconut Jam with Machinery Equipment Details & Factory Layout) ..... 1695/- 150
- Profitable Farming & Allied Projects (2nd Rev. Edn.) # ..... 1495/- 150
- Rabbit, Goat, Sheep, Poultry, Fish and Pig Farming with Feed Technology 1100/- 125
- The Complete Technology Book on Processing, Dehydration, Canning, Preservation of Fruits & Vegetables (Processed Food Industries) (4th Rev. Edn.) ..... 1995/- 200
- Handbook on Fruits, Vegetable & Food Processing with Canning & Preservation (3rd Rev. Edn.) ..... 1475/- 150
- Detailed Project Profiles on Plantation (Agro Based Projects) # ..... 1095/- 100
- Handbook on Fisheries and Aquaculture Technology ..... 1100/- 125
- The Complete Book on Meat Processing and Preservation with Packaging Technology ..... 1275/- 125
- Preservation of Meat and Poultry Products ..... 1100/- 125
- The Complete Technology Book on Meat, Poultry and Fish Processing (2nd Revised Edition) ..... 1475/- 150
- Potato and Potato Products Cultivation, Seed Production, Manuring, Harvesting, Organic Farming, Storage and Processing ..... 1275/- 125
- Handbook on Rice Cultivation and Processing ..... 1075/- 125
- The Complete Book on Beekeeping and Honey Processing (2nd Rev. Edn.) 1475/- 150
- Handbook on Citrus Fruits Cultivation and Oil Extraction ..... 1575/- 150
- Fruits, Vegetables, Corn and Oilseeds Processing Handbook ..... 1675/- 150
- Handbook on Spices and Condiments (Cultivation, Processing and Extraction) ..... 1575/- 150
- Handbook on Fermented Foods and Chemicals ..... 1875/- 150
- Handbook on Milk and Milk Proteins ..... 1275/- 125
- The Complete Book on Cultivation and Manufacture of Tea (2nd Rev. Edn.) ..... 1625/- 150
- The Complete Book on Sugarcane Processing and By-Products of Molasses (with Analysis of Sugar, Syrup and Molasses) .... 1675/- 150
- The Complete Book on Fruits, Vegetables and Food Processing ..... 1675/- 150
- The Complete Book on Cashew (Cultivation, Processing & By-Products) 1775/- 150
- The Complete Book on Tomato & Tomato Products Manufacturing (Cultivation & Processing) 2nd. Rev. Edn. .... 1400/-150
- The Complete Book on Onion & Garlic Cultivation with Processing (Production of Onion Paste, Flakes, Powder & Garlic Paste, Powder, Flakes, Oil) 2nd Revised Edition ..... 1575/-150
- Handbook on Pig Farming and Pork Processing (Feeding Management, Breeding, Housing Management, Sausages, Bacon, Cooked Ham with Packaging) 2nd Rev. Edn. .... 1275/-125
- Handbook on Manufacture of Indian Kitchen Spices (Masala Powder) with Formulations, Processes and Machinery Details (Chaat Masala, Sambar Masala, Pav Bhaji Masala, Garam Masala, Goda Masala, Pani Puri Masala, Kitchen King Masala, Thandai Masala Powder, Meat Masala, Rasam Powder, Kesari Milk Masala, Punjabi Chole Masala, Shahi Biryani Masala, Tea Masala Powder, Jaljeera Masala, Tandoori Masala, Fish Curry Masala, Chicken Masala, Pickle Masala, Curry Powder) (5th Rev. Edn.) ..... 1975/-200
- The Complete Book on Ginger Cultivation and Manufacture of Value Added Ginger Products (Ginger Storage, Ginger Oil, Ginger Powder, Ginger Paste, Ginger Beer, Instant Ginger Powder Drink and Dry Ginger from Green Ginger) ..... 1575/-150
- 55 Most Profitable Micro, Small, Medium Scale Food Processing (Processed Food) Projects and Agriculture Based Business Ideas for Startup (2nd Revised Edition) ..... 1495/-150
- Manufacture of Pan Masala, Tobacco and Tobacco Products (Tobacco Cultivation, Chewing Tobacco, Cigarettes, Bidi, Cigars, Khaini, Zarda, Gutka, Katha, Mouth Freshner, Pan Chatni, Kimam, Sweet Supari, Nicotine Sulphate, USP Nicotine, Nicotine Tartarate, Nicotine, Polacrilex Resin) 2nd Rev. Edn. .... 2225/-200
- फूड प्रोसेसिंग इंडस्ट्रीज (खाद्य प्रसंस्करण एवं कृषि आधारित उद्योग परियोजनाएँ) 2nd Rev. Edn. .... 1475/- 150
- Handbook on Maize (Corn) Processing and Manufacture of Maize Products (Oil, Starch, Corn Steep Liquor, Syrup, Cornmeal, Popcorn, Flakes, Gluten, Husk, Anhydrous Dextrose, High Maltose Syrup, Maltodextrin Powder, Monohydrate Dextrose, Sorbitol, Ethanol, Cattle Feed with Manufacturing Processes, Equipment Details and Plant Layout) ..... 1895/- 150

## NAME OF BOOKS

₹ / US\$

- The Complete Book on Gums and Stabilizers for Food Industry ..... 1275/- 125

## CONFECTIONERY, COCOA, CHOCOLATE, ICE CREAM, BAKERY & SNACKS

- Modern Technology of Confectionery Industries with Formulae & Processes (2nd Rev. Ed.) ..... 600/- 100
- The Complete Technology Book of Cocoa, Chocolate, Ice Cream and Other Milk Products ..... 1275/- 125
- The Complete Technology Book on Flavoured Ice Cream (Manufacturing Process, Flavours, Formulations with Machinery Details) 2nd Revised Edition ..... 1475/- 150
- The Complete Technology Book on Bakery Products (Baking Science with Formulation & Production (5th Rev. Edition) .... 1875/- 150
- The Complete Technology Book on Snack Foods (2nd Rev. Edn.) .... 1475/- 150
- Confectionery Products Handbook (Chocolate, Toffees, Chewing Gum & Sugar Free Confectionery) ..... 1975/- 200

## SMALL SCALE INDUSTRY (SSI), ENTREPRENEURSHIP, PROJECT IDENTIFICATION AND PROFILES, HI-TECH PROJECTS, EXPORT BUSINESS, GUIDELINES, SELF EMPLOYMENT, WOMEN ENTREPRENEURSHIP, SMALL, COTTAGE & HOME INDUSTRIES

- Stop Dreaming—Start Your New Business ..... 400/- 50
- What No One Ever Tells You About Starting Your Business—Facilities and Procedures for Entrepreneurs ..... 400/- 50
- Secrets for Making Big Profits from Your Business with Export Guidelines ..... 400/- 50
- Opportunities for Women Entrepreneurship (With Project Profiles) 2nd Edition ..... 575/- 50
- लघु व कुटीर उद्योग (स्मॉल स्केल इण्डस्ट्रीज) (5th Revised Edition) ... 1150/- 125
- Profitable Small, Cottage & Home Industries ..... 800/- 100
- Select and Start Your Own Industry (4th Revised Edition) ..... 475/- 50
- Just For Starters : How To Start Your Own Export Business ? 4th Revised Edition ..... 975/-100
- Just For Starters : How To Become A Successful Businessman ? 3rd Revised Edition ..... 475/- 75
- Best Businesses You Can Start With Low Cost (2nd Rev. Edition) ... 750/-100
- 50 Projects To Start With 5,00,000 ..... 475/- 75
- Just For Starters: Selected Projects To Start With 30,00,000 ..... 475/- 50
- Just For Starters: Selected Projects To Start With 15,00,000 ..... 475/- 50
- Just For Starters : Selected Projects To Start With 35,00,000 ..... 475/- 50
- Grow Rich By Starting Your Own Business ..... 325/- 50
- 50 Best Home Businesses To Start with Just 50,000 ..... 425/- 75
- Profitable Cottage and Tiny Industries ..... 475/- 50
- Detailed Project Profiles on Selected Hi-Tech Projects (Project Reports) # ..... 795/- 100
- Money Making Business Ideas You Can Start from Home with Low Costs (Profitable Part Time, Spare Time and Side Businesses) 2nd Revised Edition ..... 800/- 100
- स्मॉल स्केल इण्डस्ट्रीज प्रोजेक्ट्स (लघु, कुटीर व घरेलू उद्योग परियोजनाएँ उद्यमिता मार्गदर्शिका) 2nd Rev. Edn. .... 950/- 100
- Start-Up Projects for Entrepreneurs : 50 Highly Profitable Small & Medium Industries—2nd Rev. Edn. .... 1700/- 150
- Entrepreneurs Start-Up Handbook: Manufacturing of Profitable Household (FMCG) Products with Process & Formulations (2nd Rev. Edition) ..... 1675/- 150
- Profitable Small Scale Industries Money making Business Ideas for Startup (when you don't know what industry to start) ..... 975/- 100

## FASHION TECHNOLOGY

- Fashion Technology Handbook ..... 495/- 75

## CANDLE: MAKING & DESIGNS

- The Complete Technology Book on Candle: Making & Designs .... 650/- 100

## PLASTICS, SPECIALITY PLASTICS, FOAMS (URETHANE, FLEXIBLE, RIGID), PET & PREFORM, POLYESTER FIBERS, MOULD DESIGNS, PLASTIC FILMS, HDPE AND THERMOSET PLASTICS, MEDICAL PLASTICS, INDUSTRIAL POLYMERS, ADDITIVES, COLOURANTS AND FILLERS, FIBRE GLASS, OPTICAL GLASS AND REINFORCED PLASTICS

- Modern Technology of Plastic Processing Industries (2nd Edn.) ... 975/- 100
- Detailed Project Profiles on Hi-Tech Plastic Products (2nd Revised Edition) # ..... 1895/- 150
- Handbook on Pet Film and Sheets, Urethane Foams, Flexible Foams, Rigid Foams, Speciality Plastics, Stretch Blow Moulding, Injection Blow Moulding, Injection and Co-Injection Preform Technologies ..... 1275/- 125
- Polymers and Plastics Technology Handbook ..... 750/- 100
- The Complete Book on Medical Plastics ..... 975/- 100

# Limited Edition—only photostat copy available

## NAME OF BOOKS

₹ / US\$

- The Complete Technology Book on Expanded Plastics, Polyurethane, Polyamide and Polyester Fibers ..... 1275/- 125
- The Complete Technology Book on Industrial Polymers, Additives, Colourants and Fillers..... 1100/- 125
- The Complete Technology Book on Polymers (With Processing & Applications)..... 1100/- 125
- The Complete Technology Book on Plastic Extrusion, Moulding and Mould Designs ..... 1000/- 100
- The Complete Technology Book on Fibre Glass, Optical Glass and Reinforced Plastics..... 1275/- 125
- The Complete Technology Book on Plastic Films, HDPE and Thermoset Plastics..... 1175/- 125
- Modern Technology of Plastic and Polymer Processing Industries..... 750/- 100
- Profitable Plastic Industries ..... 250/- 50
- The Complete Book on Water Soluble Polymers ..... 1575/- 150
- Speciality Plastics, Foams (Urethane, Flexible, Rigid) Pet & Preform Processing Technology Handbook..... 1275/- 125

## LEATHER PROCESSING & TANNING

- Leather Processing & Tanning Technology Handbook..... 1400/-150

## TEXTILE SPINNING, WEAVING, FINISHING AND PRINTING, PROCESSING WITH EFFLUENT TREATMENT, TEXTILE DYES & PIGMENTS, NATURAL DYES & PIGMENTS, NATURAL FIBERS, JUTE & COIR

- The Complete Technology Book on Textile Spinning, Weaving, Finishing and Printing (3rd Rev.Edn.) ..... 1725/- 150
- The Complete Technology Book on Textile Processing with Effluent Treatment..... 1000/- 100
- Modern Technology of Textile Dyes & Pigments (2nd Rev. Edn.).. 1675/- 150
- The Complete Technology Book on Dyes and Dye Intermediates (2nd Rev. Edn.)..... 1995/- 200
- The Complete Book on Natural Dyes & Pigments..... 1100/- 125
- Handbook on Natural Dyes for Industrial Applications (Extraction of Dyestuff from flowers, Leaves, Vegetables) 2nd Rev. Edn..... 1575/- 150
- Natural Fibers Handbook with Cultivation & Uses..... 1275/- 125
- Woollen Spinning, Weaving, Knitting, Dyeing, Bleaching and Printing Technology Handbook ..... 1100/- 125
- Handbook on Textile Auxiliaries, Dyes and Dye Intermediates Technology ..... 1575/- 150
- The Complete Book on Textile Processing and Silk Reeling Technology ..... 1750/- 150
- A Concise Guide on Textile Dyes, Pigments and Dye Intermediates with Textile Printing Technology..... 1675/- 150

## ELECTROPLATING, ANODIZING & METAL TREATMENT, POWDER COATING AND METAL FINISHING

- Electroplating, Anodizing & Metal Treatment Handbook ..... 1475/- 150
- The Complete Technology Book on Electroplating, Phosphating, Powder Coating and Metal Finishing (2nd Rev. Edn.)..... 1675/- 150
- Handbook on Electroplating with Manufacture of Electrochemicals ..... 1695/- 150

## RUBBER PROCESSING, RUBBER CHEMICALS AND COMPOUNDING

- The Complete Book on Rubber Processing and Compounding Technology (Rubber Vulcanization, Compounding, Rubber Gloves, Condoms, Rubber Band, Latex Mattress, Bushings, Gasket, Sheets, Tubing, Tyre, Hoses, Conveyor Belt, Latex and Foam Rubber, Silicone Rubber, Reclaimed Rubber, Waste Tyre Recycling with Manufacturing Process, Machinery Equipment Details and Factory Layout) (3rd Revised Edition) ..... 2275/- 200
- The Complete Book on Rubber Chemicals..... 1575/- 150
- Handbook on Rubber and Allied Products (with Project Profiles) #..... 2295/- 200

## SURFACE COATING, PAINTS, VARNISHES & LACQUERS

- The Complete Book on Resins (Alkyd, Amino, Phenolic, Polyurethane Epoxy, Silicone, Acrylic) Paints, Varnishes, Pigments & Additives (Surface Coating Products with Formulae) 3rd Rev. Edn. .... 2275/- 200
- Paints, Pigments, Varnishes and Enamels Technology Handbook (With Process & Formulations) 2nd Rev. Edn. .... 1675/- 150
- Modern Technology of Paints, Varnishes & Lacquers (2nd Edn.) ..... 1075/- 125
- Handbook on Paints and Enamels..... 1275/- 125
- Surface Coating Technology Handbook ..... 1475/- 125
- Spirit Varnishes Technology Handbook (with Testing and Analysis) ..... 1275/- 150
- The Testing Manual of Paints, Varnishes and Resins..... 1875/- 150
- Handbook on Paint Testing Methods ..... 1575/- 150
- Manufacture of Thinners & Solvents (Properties, Uses, Production, Formulation with Machinery Details) 2nd Edn. Rev..... 1875/- 150
- Manufacture of Paint Varnish & Allied Products (Industrial Paint, N.C. Thinner, Paint Industry, Infrared Reflected (IR) Paint, High Temperature Aluminium Based Paint, Paint Drier, Powder Coating Paint, Latex Paints for Roof) 3rd Edition # ..... 1995/- 200

# Limited Edition—only photostat copy available

## NAME OF BOOKS

₹ / US\$

## GUMS, ADHESIVES & SEALANTS, ROSIN & DERIVATIVES, RESINS AND OLEORESINS

- Gums, Adhesives & Sealants Technology (with Formulae & their Applications) 2nd Rev. Edn. .... 1475/- 150
- Adhesives Formulary Handbook (Adhesives for Construction, Fabric, Packaging, Paper, Film, Flocking, Foam, Water-Based, Oil-Based, Corrugation, Labelling, Hot Melt Adhesives, Pressure Sensitive Adhesives, Hot Melt Coatings, Grouting Compounds, Epoxy Adhesives, Caulking, Cement, Concrete and Plaster Patching Compounds, Glazing Compounds, Joint Cements, Mastics, Putties, Sealants, Solders with Machinery Equipment Details & Factory Layout) ..... 1895/- 150
- Handbook on Speciality Gums, Adhesives, Oils, Rosin & Derivatives, Resins, Oleoresins, Katha, Chemicals with Other Natural Products ..... 2175/- 150
- The Complete Book on Adhesives, Glues & Resins Technology (with Process & Formulations) 2nd Rev. Edn. .... 1675/- 150
- The Complete Technology Book on Industrial Adhesives..... 1675/- 150
- The Complete Book on Water Soluble Gums and Resins ..... 1675/- 150

## SYNTHETIC, ALKYD, EPOXY AND PHENOLIC RESINS

- Modern Technology of Synthetic Resins & Their Applications (2nd Revised Edition)..... 1575/- 150
- Synthetic Resins Technology Handbook ..... 1100/- 125
- The Complete Technology Book on Synthetic Resins with Formulae & Processes ..... 1150/- 125
- Alkyd Resins Technology Handbook..... 1100/- 125
- Epoxy Resins Technology Handbook (Synthesis, Epoxy Resin Adhesives, Epoxy Coatings) with Manufacturing Process and Machinery Equipment Details (3rd Revised Edition)..... 2275/- 200
- Phenolic Resins Technology Handbook (2nd Revised Edition) 1895/- 150

## PETROLEUM, GREASES, PETROCHEMICALS, LUBRICANTS

- Modern Technology of Petroleum, Greases, Lubricants & Petrochemicals (Lubricating Oils, Cutting Oil, Additives, Refining, Bitumen, Waxes with Process and Formulations) 3rd Rev. Edn. ... 1995/- 150
- The Complete Book On Distillation And Refining of Petroleum Products (Lubricants, Waxes And Petrochemicals) ..... 975/- 100
- Lubricating Oils, Greases and Petroleum Products Manufacturing Handbook..... 1475/- 150
- Manufacturing of Petroleum Products (Petroleum Waxes, Greases and Solid Lubricants, Solid Fuels, Gaseous Fuels, Gasoline, Diesel Fuel Oils, Automotive, Diesel and Aviation Fuels, Lubricating Oils and Lubricating Greases)..... 1675/- 150
- Petroleum & Petroleum Products Technology Handbook (Thermal Cracking of Pure Saturated Hydrocarbons, Petroleum Asphalts, Refinery Products, Blending and Compounding, Oil Refining and Residual Fuel Oils)..... 1875/- 150

## WASTE MANAGEMENT, PRODUCTS FROM WASTE, MEDICAL, MUNICIPAL WASTE, E-WASTE, BIOMASS, MEDICAL & SURGICAL DISPOSABLE PRODUCTS

- Products from Waste (Industrial & Agro Waste) 2nd Edition ... 975/- 100
- Modern Technology of Waste Management: Pollution Control, Recycling, Treatment & Utilization ..... 975/- 100
- Handbook on Recycling & Disposal of –Hospital Waste Municipal, –Solid Waste, –Biomedical Waste, –Plastic Waste..... 1275/- 125
- Water and Air Effluents Treatment Handbook..... 1275/- 125
- The Complete Guide on Industrial Pollution Control ..... 1275/- 125
- The Complete Book on Managing Food Processing Industry Waste ... 1275/- 125
- Handbook on Organic Waste for Biological Treatment, Liquid Manure into a Solid, Tomato Waste Water Treatment, Oxalic Acid from Jute Stick, Cotton Processing Waste, Fish Waste, Agro-Industrial Wastes, Bioconversion of Pretreated Wheat Straw and Sunflower Stalks to Ethanol, Agricultural Waste Treatment, Waste of Dehydrated Onion, Beef-Cattle Manure Slurry, Meat Meal and Algae for Calves, Wastes from Large Piggeries, Pig Waste, Oxytetracycline, Methane from Cattle Waste ..... 1275/- 125
- Handbook on Medical and Surgical Disposable Products (Blood Bags, Plastic Gloves, I.V. Cannula, Infusion Set, Gowns, Masks, Catheter, Cotton and Bandage, Surgical Wear, Syringes) ..... 1775/- 150
- Disposable Products Manufacturing Handbook (Plastic Cups, Cutlery, Paper Cups, Banana Leaf Plates, Facial Tissues, Wet Wipes, Toilet Paper Roll, Sanitary Napkins, Baby Diapers, Thermocol Products, PET Bottles)..... 1575/- 150
- The Complete Book on Biomass Based Products (Biochemicals, Biofuels, Activated Carbon) ..... 1575/- 150
- The Complete Technology Book on E-Waste Recycling (Printed Circuit Board, LCD, Cell Phone, Battery, Computers) 3rd Rev. Edn. 1975/- 150
- The Complete Book on Waste Treatment Technologies (Industrial, Biomedical, Water, Electronic, Municipal, Household/ Kitchen, Farm Animal, Dairy, Poultry, Meat, Fish & Sea Food Industry Waste and Machinery Equipment Details) 2nd Revised Edition ..... 2095/- 200



## NAME OF BOOKS

₹ / US\$

- **Manufacture of Value Added Products from Rice Husk (Hull) and Rice Husk Ash (RHA) (Precipitated Silica, Activated Carbon, Cement, Electricity, Ethanol, Hardboard, Oxalic Acid, Paper, Particle Board, Rice Husk Briquettes, Rice Husk Pellet, Silicon, Sodium Silicate Projects) 2nd Rev. Edition..... 1400/- 150**
- **Medical, Municipal and Plastic Waste Management Handbook..... 1275/- 125**
- **The Complete Book on Biological Waste Treatment and their Utilization ..... 1675/- 150**

## INFRASTRUCTURE, HOSPITALITY, MEDICAL, ENTERTAINMENT, WAREHOUSING, EDUCATION BUSINESS & REAL ESTATE PROJECTS

- **Investment Opportunities in Infrastructure Projects # ..... 2500/- 225**
- **Investment Opportunities In Hospitality, Medical, Entertainment, Ware Housing & Real Estate Projects (with 15 Project Profiles)# ..... 4408/- 350**
- **How to Start Profitable Education Business (12 Detailed Project Profiles) (Engineering, Dental, ITI, Management, Marine Engineering, Medical, Pharmacy, Polytechnic College and Schools) 2nd Revised Edition # ..... 2295/- 200**

## WOOD AND ITS DERIVATIVES, BAMBOO PLANTATION

- **The Complete Technology Book on Wood and Its Derivatives .... 1100/- 125**
- **Bamboo Plantation and Utilization Handbook ..... 1475/- 150**

## HERBAL PRODUCTS, AYURVEDIC, HERBAL & UNANI MEDICINES, DRUGS, NEEM, HERBS & MEDICINAL PLANTS CULTIVATION, COSMETICS, NATURAL PRODUCTS, JATROPHA

- **Handbook on Unani Medicines with Formulae, Processes, Uses and Analysis (2nd Revised Edition) ..... 1695/- 150**
- **Handbook on Herbal Drugs And Its Plant Sources ..... 1000/- 100**
- **Herbal Foods And Its Medicinal Values ..... 1275/- 125**
- **Herbal Cosmetics & Ayurvedic Medicines (Eou) (3rd Rev. Edn.).. 1475/- 150**
- **Handbook on Ayurvedic Medicines with Formulae, rocesses & Their Uses (2nd Rev. Edn.)..... 1475/- 150**
- **Herbal Cosmetics Handbook (Formulae, Manufacturing Processes with Machinery & Equipment Details (4th Rev. Edn.). 1775/- 150**
- **The Complete Technology Book on Herbal Beauty Products (Cosmetic Industry) with Formulations, Manufacturing Process, Machinery Equipment Details & Plant Layout ..... 1695/- 150**
- **Modern Technology of Cosmetics ..... 1100/- 100**
- **Handbook of Herbal Products (Medicines, Cosmetics, Toiletries, Perfumes) 2 Vols. .... 1500/- 220**
- **Herbs Cultivation & Medicinal Uses..... 975/- 100**
- **Herbs Cultivation & Their Utilization..... 800/- 100**
- **Medicinal Plants Cultivation & Their Uses..... 975/- 100**
- **Compendium of Medicinal Plants..... 875/- 100**
- **Compendium of Herbal Plants..... 975/- 100**
- **Cultivation And Processing of Selected Medicinal Plants..... 1175/- 125**
- **Aromatic Plants Cultivation, Processing and Uses ..... 975/- 100**
- **Cultivation and Utilization of Aromatic Plants..... 1100/- 125**
- **The Complete Book on Jatropha (Bio-Diesel) with Ashwagandha, Stevia, Brahmi & Jatamansi Herbs (Cultivation, Processing & Uses) ..... 1500/- 150**
- **Handbook on Medicinal Herbs With Uses..... 1075/- 125**
- **Aloe Vera Handbook Cultivation, Research Findings, Products, Formulations, Extraction & Processing ..... 1275/- 125**
- **Handbook on Herbs Cultivation & Processing ..... 875/- 100**
- **Handbook of Neem & Allied Products ..... 975/- 100**
- **Handbook on Herbal Medicines..... 750/- 100**
- **Handbook on Cosmetics (Processes, Formulae with Testing Methods)..... 1675/- 150**
- **Handbook on Drugs from Natural Sources ..... 1175/- 125**

## ESSENTIAL OILS, AROMATIC CHEMICALS, PERFUMES, FLAVOURS, FOOD COLOURS

- **The Complete Technology Book of Essential Oils (Aromatic Chemicals (Reprint 2011)..... 1275/- 125**
- **Essential Oil Hand Book..... 975/- 100**
- **The Complete Technology Book on Herbal Perfumes & Cosmetics (2nd Rev Edn.)..... 1275/- 125**
- **Modern Technology of Perfumes, Flavours and Essential Oils 2nd Edn. .... 975/- 100**
- **Food Colours, Flavours And Additives Technology Handbook (2nd Revised Edition) ..... 1895/- 150**
- **Food Flavours Technology Handbook..... 1075/- 125**
- **The Complete Technology Book on Flavours, Fragrances and Perfumes ..... 1675/- 150**
- **Perfumes and Flavours Technology Handbook with Manufacturing Formulations, Process, Machinery Equipment Details & Factory Layout (2nd Edition) ..... 1995/- 200**

# Limited Edition—only photostat copy available

## NAME OF BOOKS

₹ / US\$

- **Handbook on Perfume, Deodorant, Air Freshener, Body Spray, Fragrances, Flavours and Essential Oil Industry with Manufacturing Formulations, Process, Machinery Equipment Details & Factory Layout..... 1775/- 150**

## SOAPS, DETERGENTS, ACID SLURRY, TOILETRIES & DISINFECTANTS

- **Modern Technology of Soaps, Detergents & Toiletries (With Formulae & Project Profiles) (4th Rev. Edn.)..... 1275/- 125**
- **Herbal Soaps & Detergents Handbook..... 1275/- 125**
- **Handbook on Soaps, Detergents & Acid Slurry (3rd Rev. Edn.) ... 1575/- 150**
- **The Complete Technology Book on Detergents (2nd Rev. Edn.).. 1100/- 125**
- **The Complete Technology Book on Soaps (2nd Revised Edn.) .... 1425/- 150**
- **Surfactants, Disinfectants, Cleaners, Toiletries, Personal Care Products Manufacturing and Formulations (Phenyl, Naphthalene Ball, Mosquito Coil, Floor Cleaner, Glass Cleaner, Toilet Cleaner, Utensil Cleaning Bar, Liquid Detergent, Detergent Powder, Detergent Soap, Liquid Soap, Handwash, Hand Sanitizer, Herbal Shampoo, Henna Based Hair Dye, Herbal Cream, Shaving Cream, Air Freshener, Shoe Polish, Tooth Paste) 3rd Revised Edition .... 1895/- 200**
- **Soaps, Detergents and Disinfectants Technology Handbook (Washing Soap, Laundry Soap, Handmade Soap, Detergent Soap, Liquid Soap, Hand Wash, Liquid Detergent, Detergent Powder, Bar, Phenyl, Floor Cleaner, Toilet Cleaner, Mosquito Coils, Naphthalene Balls, Air Freshener, Hand Sanitizer and Aerosols Insecticide) (3rd Revised Edition)..... 1595/- 150**

## GLASS, CERAMICS, COAL, LIGNIN, RARE EARTH & MINERALS

- **The Complete Book on Glass & Ceramics Technology (2nd Revised Edition)..... 1495/- 150**
- **The Complete Book on Glass Technology..... 1625/- 150**
- **The Complete Technology Book on Minerals & Mineral Processing ..... 2200/- 200**
- **Handbook on Rare Earth Metals and Alloys (Properties, Extraction, Preparation and Applications)..... 1875/- 150**
- **Hand book on Coal, Coke, Cotton, Lignin, Hemicellulose, Wood, Wood-Polymer Composites, Lignocellulosic-Plastic Composites from Recycled Materials, Wood Fiber, Rosin and Rosin Derivatives ..... 1875/- 150**

## ALUMINIUM, STEEL, FERROUS, NON-FERROUS METALS WITH CASTING AND FORGING, FERROALLOYS & AUTOMOBILE COMPONENTS

- **The Complete Technology Book on Hot Rolling of Steel ..... 1575/- 150**
- **Steel Rolling Technology Handbook (2nd Revised Edition) .... 1775/- 150**
- **The Complete Book on Ferrous, Non-Ferrous Metals with Casting and Forging Technology..... 1575/- 150**
- **The Complete Technology Book on Aluminium and Aluminium Products ..... 1450/- 150**
- **The Complete Technology Book on Steel and Steel Products (Fasteners, Seamless Tubes, Casting, Rolling of flat Products & others)..... 1625/- 150**
- **The Complete Book on Ferroalloys (Ferro Manganese, Ferro Molybdenum, Ferro Niobium, Ferro Boron, Ferro Titanium, Ferro Tungsten, Ferro Silicon, Ferro Nickel, Ferro Chrome)..... 2775/- 250**
- **Steel and Iron Handbook..... 1775/- 150**
- **Handbook on Steel Bars, Wires, Tubes, Pipes, S.S. Sheets Production with Ferrous Metal Casting & Processing ..... 1775/- 150**
- **The Complete Book on Production of Automobile Components & Allied Products ( Engine Parts, Piston, Pin, Piston Ring, Valve, Control Cable, Engine Mounting, Auto Lock, Disc Brake, Drum, Gear, Leaf Spring, Shock Absorber, Silencer, Chain, Cylinder Block, Chassis, Battery, Tyre & Flaps) ..... 2275/- 200**
- **Handbook on Automobile & Allied Products (2nd Rev. Edn.) # ..... 1495/- 150**

## FORMULARY (FORMULATION) BOOKS

- **Selected Formulary Book on Cosmetics, Drugs, Cleaners, Soaps and Detergents (2nd Revised Edition)..... 1475/- 150**
- **Selected Formulary Book on Inks, Paints, Lacquers, Varnishes and Enamels ..... 1475/- 150**
- **Selected Formulary Handbook..... 1475/- 150**
- **Selected Formulary Book on Petroleum, Lubricants, Fats, Polishes, Glass, Ceramics, Nitrogenous Fertilizers, Emulsions, Leather and Insecticides ..... 2275/- 200**

## CONSTRUCTION MATERIALS, CEMENT, BRICKS, ASBESTOS

- **The Complete Book on Construction Materials..... 1475/- 150**
- **The Complete Technology Book on Bricks, Cement and Asbestos ... 1400/- 150**
- **The Complete Technology Book on Asbestos, Cement, Ceramics and Limestone..... 1875/- 150**
- **Handbook on Gypsum and Gypsum based Products (Mining, Processing, Transportation, Handling & Storage, Gypsum Board, Plaster of Paris with Machinery & Equipment Details) ..... 2275/- 200**



- The Complete Book on Cement & Concrete Products Manufacturing (AAC Blocks, Slag & High Alumina Cement, Clinker, Concrete Block, Floor Slab, Roof Tiles, Interlocking Paving Blocks, Fly Ash Bricks, Flooring Tiles, Precast RCC Wall, Prestressed Concrete Beams, Poles, Pipe, Sleeper, RCC Beam, Ready Mix Concrete and Wall Putty with Manufacturing Process, Machinery Equipment Details and Factory Layouts)..... 1975/- 150

### EMULSIFIERS, OLEORESINS AND TALL OIL

- The Complete Book on Emulsifiers with Uses, Formulae and Processes. (2nd Rev. Edn.) ..... 1400/- 150
- Handbook on Oleoresin and Pine Chemicals (Rosin, Terpene, Derivatives, Tall Oil, Resin & Dimer Acids..... 2200/- 200
- Handbook on Tall Oil Rosin Production, Processing and Utilization..... 1575/- 150

### COLD STORAGE, COLD CHAIN & WAREHOUSE

- The Complete Book on Cold Storage, Cold Chain & Warehouse (with Controlled Atmosphere Storage & Rural Godowns) 5th Rev.Edn. .... 1650/- 150

### BATTERY ASSEMBLING AND RECYCLING

- Handbook on Production, Recycling of Lithium Ion and Lead-Acid Batteries (with Manufacturing Process, Machinery Equipment Details & Plant Layout) ..... 2995/- 250

### RENEWABLE ENERGY AND SOLAR PRODUCTS

- Solar PV Power and Solar Products Handbook (Solar Energy, Solar Lighting, Solar Power Plant, Solar Panel Solar Pump, Solar Photovoltaic Cell, Solar Inverter, Solar Thermal Power Plant, Solar Farm, Solar Cell Modules with Manufacturing Process, Equipment Details, Plant Layout & Process Flow Chart) ..... 2275/- 200

### ELECTRIC VEHICLES MANURING, E- CAR, ELECTRIC BICYCLE, E- SCOOTER, E-MOTORCYCLE, ELECTRIC RICKSHAW, E- BUS, ELECTRIC TRUCK, E MOBILITY, EV INDUSTRY, AUTOMOBILE, LIGHT ELECTRIC VEHICLES, ELECTRIC VEHICLE INDUSTRY

- Handbook on Electric Vehicles Manufacturing (E- Car, Electric Bicycle, E- Scooter, E-Motorcycle, Electric Rickshaw, E- Bus, Electric Truck with Assembly Process Machinery Equipments & Layout) ..... 3695/- 250

# Limited Edition—only photostat copy available

### ELECTRICAL CABLE, WIRE AND WIRE PRODUCTS

- Manufacture of Electrical Cables, Wire and Wire Products Handbook (Copper Wire, Barbed Wire, Spring, Wire Nail, Wire Mesh, Fiber-Optic Cable, PVC Wire and Cable, Aluminum Wire, Steel Wire Rope, Galvanised Wire, Coaxial Cable, Litang Cable LAN/Ethernet Cable, Power Cord Cable, Submersible Cable, XLPE Cable with Machinery Equipment Details & Factory Layout) ..... 2575/- 225

### ALCOHOLIC, NON-ALCOHOLIC, BEVERAGES, WINE & INDUSTRIAL ALCOHOL

- The Complete Technology Book on Alcoholic and Non- Alcoholic Beverages (Fruit Juices, Sugarcane Juice, Whisky, Beer, Microbrewery, Rum and Wine) 2nd Revised Edition ..... 2275/- 200
- The Complete Book on Wine Production ..... 2275/- 200
- Industrial Alcohol Technology Handbook ..... 1675/- 150
- Manufacture of Food & Beverages (2nd Edn.) # ..... 1895/- 150

## NIIR PROJECT CONSULTANCY SERVICES

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi-110 007 (India).

Tel. : 91-11- 23843955, 23845886

Mob.: + 91-9097075054, 8800733955

Website : [www.niir.org](http://www.niir.org) [www.entrepreneurindia.co](http://www.entrepreneurindia.co)

E-mail : [info@niir.org](mailto:info@niir.org) , [npcs.india@gmail.com](mailto:npcs.india@gmail.com)

The disassembly of vehicles for spare parts is known as vehicle recycling. Vehicles have value as a source of replacement components as they reach the end of their useful life, which has given rise to the car dismantling industry. Wrecking yard, auto dismantling yard, automotive spare parts supplier, and, more recently, auto or vehicle recycling are all terms used to describe the industry's business outlets. Vehicle recycling has long been a part of the process, but in recent years, manufacturers have gotten more active. A car crusher is frequently used to decrease the size of a discarded automobile so that it can be transported to a steel mill.

The "Voluntary Car-Fleet Modernization Programme," or India's vehicle scrapping programme, aims to usher in a new era of what it means to own and utilise an automobile in India. Road Transport and Highways Minister Nitin Gadkari launched it in Parliament in March. In the aim of greater pollution control and safety, which new vehicles provide, the policy mandates that all autos above a particular age be taken off the road. If a commercial vehicle over 15 years old or a personal vehicle over 20 years old

# Automated Vehicle Scrapping and Recycling Unit

fails an automated fitness test, they are slated for scrapping, regardless of whether they run on diesel or gasoline.

As a result, car recycling is critical. It's also critical to handle them appropriately to guarantee that dangerous waste isn't released into the environment. Professionals who know how to dispose of hazardous liquids including fuel, coolants, and brake fluids must dispose of such cars.

Environmental Advantages: Steel is one of the most important materials in the construction of an automobile; it is used to construct the majority of the components, including the framework. Because iron ores are needed to create steel, recycling cars aids in the preservation of iron ores. All waste generated as a by-product of steel processing is also avoided, ensuring that air pollution does not rise.

Wildlife Protection: It's also worth noting that appropriate vehicle recycling can aid in the preservation of local flora and fauna. Steel mining is unfriendly to the environment and causes soil degradation and erosion, which means animals are unable to maintain their usual routines and may grow ill as a result. Sediment runoff into bodies of water is also a result of land erosion, which has an impact on water quality and wildlife proliferation.

### PROJECT COST ESTIMATE

CAPACITY	
Capacity	: 1000 Vehicles Per Month
Plant & Machinery	: ₹ 497 Lakhs
Cost of Project	: ₹ 2090 Lakhs
Rate of Return	: 29%
Break Even Point	: 40%

Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

**NIIR PROJECT CONSULTANCY SERVICES**

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi-110 007 (India). Tel. : 91-11- 23843955 • 23845886

Mob.: +91-9097075054 • 8800733955

Website : [www.niir.org](http://www.niir.org) • [www.entrepreneurindia.co](http://www.entrepreneurindia.co) • E-mail : [info@niir.org](mailto:info@niir.org) • [npcs.india@gmail.com](mailto:npcs.india@gmail.com)

# SELECTED BUSINESS IDEAS FOR RIGHT INVESTMENT

## EACH DETAILED PROJECT REPORT (BUSINESS PLAN) CONTAINS



AN ISO 9001 : 2015 CERTIFIED COMPANY



**Market Survey Cum Detailed Techno Economic Feasibility Reports**

**BEGINNING :** Project Introduction, Brief History of the Product, Properties, BIS (Bureau of Indian Standard) Specifications & Requirements, Uses & Applications.

**MARKET SURVEY :** Present Market Position, Expected Future Demand, Statistics of Imports & Exports, Export Prospect, Names and Addresses of Existing Units (Present Manufactures).

**PLANT & MACHINERY :** List of Plant & Machineries, Miscellaneous Items and Accessories, Instruments, Laboratory Equipments and Accessories, Plant Location, Electrification, Electric Load and Water, Maintenance, Suppliers/Manufacturers of Plant and Machineries.

**RAW MATERIAL :** List of Raw Materials, Properties of Raw Materials, Availability of Raw Materials, Required Quality of Raw Materials, Cost/Rates of Raw Materials.

**MANUFACTURING TECHNIQUES :** Formulae Detailed Process of Manufacture, Flow Sheet Diagram.

**PERSONNEL REQUIREMENTS :** Requirement of Staff & Labour, Personnel Management, Skilled & Unskilled Labour.

**LAND & BUILDING :** Requirement of Land Area, Rates of the Land, Built up Area, Construction Schedule, Plant Layout.

**FINANCIAL ASPECTS :** Cost of Raw Materials, Cost of Land & Building, Cost of Plant & Machineries, Fixed Capital Investment, Working Capital, Project Cost, Capital Formation, Cost of Production, Profitability Analysis, Break Even Point, Cash Flow Statement for 5 to 10 Years, Depreciation Chart, Conclusion, Projected Balance Sheet, Land Man Ratio.

- Prepared by highly qualified and experienced consultants and Market Research and Analyst Supported by a panel of experts and computerised data bank.
- Data provided are reliable and upto date collected from suppliers/manufacturers, plants already commissioned in India.
- NPCS Reports are very economical and immediately available on demand where as commissioned Feasibility Studies are time consuming and costly.

**FOR ASSESSING MARKET POTENTIAL, INVESTMENT DECISION MAKING CORPORATE DIVERSIFICATION PLANNING ETC.**

**NPCS Engineers and Consultants have prepared Market Survey Cum Detailed Techno Economic Feasibility Report on the following products which are most viable and profitable.**

## Business Ideas: 3–3.5 Crore (Plant and Machinery) : Selected Project Profiles for Entrepreneurs, Startups



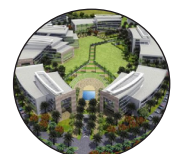
- » Activated Carbon from Coconut Shell
- » Lithium Ion Battery (Lifepo4) Production
- » Active Pharma Ingredients (API) (Cephalexin, Ampicillin Trihydrate, Ibuprofen and Paracetamol)
- » Aluminium Extrusion Plant
- » Aluminium Foil
- » Aluminium Rolling Mill
- » Aluminium Wire & Cables
- » Aluminum Ingots from Aluminum Scrap with Dross Processing
- » Artificial Sand from Stones and Waste Metals
- » Beer Plant
- » Bicycle and Cycle Rickshaw Manufacturing



- » Bicycle Manufacturing
- » Automated Vehicle Scrapping and Recycling Unit
- » Caffeine from Tea Waste
- » Calcium Propionate
- » Cement Plant
- » Chocolate, Toffee and Candy Industry
- » Commercial Vehicles Dealership -Sale of Commercial Vehicles -Spares -Servicing
- » Copper Powder By Electrolytic Process
- » Disposable Nitrile Gloves (Nitrile Examination Hand Gloves)
- » Disposable Plastic Syringes
- » Disposable Surgical Face Mask & N95 Masks



- » Ductile Iron Pipe Fittings
- » Extraction of Cashew Nut Shell Oil and Cardanol
- » Functional Food Based Bakery Products (Bread, Cookies and Biscuits)
- » Geotextiles for Road and Construction
- » Geotextiles for Road Construction
- » Good Future Prospects for TMT Bars
- » Green Peas Processing & Preservation
- » Green Peas Processing and Preservation Using IQF Technology
- » Groundnut Oil
- » Gypsum Plaster Board
- » Hospital 30 Bedded
- » Industrial Park



**Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :**

**NIIR PROJECT CONSULTANCY SERVICES**

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi-110 007 (India). Tel. : 91-11- 23843955 • 23845886

Mob.: +91-9097075054 • 8800733955

Website : [www.niir.org](http://www.niir.org) • [www.entrepreneurindia.co](http://www.entrepreneurindia.co) • E-mail : [info@niir.org](mailto:info@niir.org) • [npcs.india@gmail.com](mailto:npcs.india@gmail.com)

# SELECTED BUSINESS IDEAS FOR RIGHT INVESTMENT

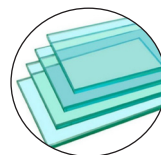
- » Lithium Ion Battery (Battery Assembly)
- » LPG Cylinders
- » Mahua Oil & Country Liquor
- » Cellulosic Cellophane Film
- » Activated Carbon from Rice Husk, Saw Dust & Coconut Shell
- » Steel Shipping Container (Cargo Container)
- » Monochloro Acetic Acid
- » Oxygen and Nitrogen Gas Plant
- » Packaged Drinking Water with Pet Bottles
- » Paracetamol



- » Paraffin Wax
- » PCC Electric Poles
- » Plain Corn Flakes & Coated Choco Flakes
- » Plastic Injection Mould
- » Auto Piston
- » Paracetamol (Acetaminophen)
- » Ready To Eat Food (Retort Packaging) Vegetable Pulao, Dal Makhani, Palak, Rajma, Potato Peas and Mutter Mushroom)
- » Roller Flour Mill
- » Roller Flour Mill (with Color Sorter)



- » Sanitary Napkins (Ultra Thin & Cotton Core Type)
- » UPVC and CPVC Pipes
- » Stabilized Insoluble Sulfur
- » Surgical & N95 Masks
- » Synthetic Camphor Powder
- » Tempering and Toughening of Flat Glass
- » TMT Bars (Sariya)
- » Toothpaste
- » Toughened Glass
- » Vitamin 'C' from Sorbitol
- » Welding Electrodes



## Highly Profitable Business Ideas for You

### Manufacturing of MS Fasteners (Screws, Nut and Bolts)

**F**astener may be defined as any device, method or component used to hold or FASTEN two or more engineering components together. Fasteners may be classified into groups and sub-groups according to the functions they perform. Probably the main division is into:

- Detachable fasteners (e.g. nut and bolt, screw, etc.);
- Non-detachable fasteners (e.g. rivet, weld, adhesive).

Fastener Material can be important when choosing a fastener due to keeping in view the strength, brittleness, corrosion resistance, galvanic corrosion properties. Cost of course an important factor which determines which materials to choose from.

A screw is a broad category of mechanical fastener with a threaded shaft, designed to screw into a part. This includes wood screws and self-tapping screws,

which have a tapered shaft with sharp threads designed to cut a mating thread in the part to which they are fastened. It also includes machine screws, which much more closely resemble bolts, but their entire shaft is normally threaded.

Nuts and Bolts are most commonly used items in the family of industrial fasteners and their demand is fast increasing due to expansion of industries in the country. Bolt is a piece of metal rod whose one end is upset and at the other end threading is done. Nut is a device which rolls on bolt threads. In nuts, internal threading is done while bolts bear external thread. Screw, demonstrate their true merit in the movements, assembly etc, of wooden components. Screws are most popular as fasteners which assemble, or join parts together to be made into a complete unit.

#### PROJECT COST ESTIMATE

##### CAPACITY:

Zinc Coated High Tension Bolt (Size M5 to M20)	: 16 MT Per Day
Zinc Coated High Tension Screw (Size M5 to M20)	: 8 MT Per Day
High Tension Nut (Size M5 to M20)	: 8 MT Per Day
Plant & Machinery	: ₹ 116 Lakhs
Cost of Project	: ₹ 758 Lakhs
Rate of Return	: 29%
Break Even Point	: 57%

### Opportunities in Manufacturing of Solar Inverter (100 KVA – 1000 KVA)

**A** solar inverter or PV inverter, is a type of electrical converter which converts the variable direct current (DC) output of a photovoltaic (PV) solar panel into a utility frequency alternating current (AC) that can be fed into a commercial electrical grid or used by a local, off-grid electrical network. It is a critical balance of system (BOS)-component in a photovoltaic system, allowing the use of ordinary AC-powered equipment. Solar power inverters have special functions adapted for use with photovoltaic arrays, including maximum power point tracking and anti-islanding protection.

Advanced solar pumping inverters convert DC voltage from the solar array into AC voltage to drive submersible pumps directly without the need for batteries or other energy storage devices. By utilizing MPPT (maximum power point tracking), solar pumping inverters regulate output frequency to control the speed of the pumps in order to save the pump motor from damage. Solar pumping inverters usually have multiple ports to allow the input of DC current generated by PV arrays, one port to allow the output of AC voltage, and a further port for input from a

water-level sensor.

The solar PV inverters market is expected to register a CAGR of more than 8%. The industry has also been hit severely due to a reduction in electricity consumption and declining economic growth. However, with resuming market activities globally, the demand for the market is growing at a faster rate. Factors, such as a drop in inverter prices and the increasing solar PV installations, are expected to boost the market growth. Advancement in technology leading to solar panel manufacturing cost reduction and increase in efficiency have also been a major factor for the growth

#### PROJECT COST ESTIMATE CAPACITY

Solar Inverter	: 15 Nos. Per Day
50 Hz 100 to 1000 KVA	
Plant & Machinery	: ₹ 373 Lakhs
Cost of Project	: ₹ 1288 Lakhs
Rate of Return	: 26%
Break Even Point	: 47%

of the solar PV inverters market. However, lack of general awareness, infrastructure development costs, and recent subsidy cuts on solar panels by governments in the Asia-Pacific region has hampered the market growth.

Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

**NIIIR PROJECT CONSULTANCY SERVICES**

106 E, Kamla Nagar, Delhi-110 007 (India). Tel. : 91-11- 23843955 • 23845886

Mob.: +91-9097075054 • 8800733955

AN ISO 9001:2015 CERTIFIED COMPANY

Website : www.niir.org • www.entrepreneurindia.co • E-mail : info@niir.org • npc.s.india@gmail.com



# Profitable Business of Cocoa Processing Unit

## Cocoa Butter, Cocoa Couverture and Cocoa Powder (Further Processed Products: Spreads and Chocolate Syrups)

**C**ocoa processing is the process of turning cocoa beans into chocolate, cocoa powder, and other related goods like cocoa butter, cocoa liquor, and so on. The Cocoa Processing Unit is one of the three main components of the cocoa processing industry (CPU). Cocoa Butter & Powder, which account for the majority of the entire CPU market, and Cocoa Liquor and Others, which are developing segments, have also been classified into the Cocoa Processing Unit (CPU) market.

"Theobroma cacao," a term referring to the tree that bears cocoa, a fundamental raw ingredient in the manufacturing of chocolate, was one of the most significant discoveries made in the 18th century. Chocolate was discovered to have originated in the Amazon basin of South America. The cocoa tree was given the name "Theobroma cacao" by Carolus Linnaeus, a Swedish botanist, which means "food of Gods" in Greek.

Tropical climates are ideal for the cocoa tree. Cocoa tree cultivation is typically done in the shade of a huge shady tree, and it necessitates sufficient moisture and nutrients to develop. A variety of rots,

wilts, and fungal infections can affect cocoa.

The cocoa tree has massive, long leaves with pale-colored blooms that produce big pods. The tree bears fruit in its third year and continues to give fruit until it is twenty years old.

Despite the fact that grindings have increased to satisfy demand, processing's global market share has remained stable. In terms of volume, the Netherlands is one of the largest processing countries, accounting for almost 13% of global grindings. Around 38% of the processing market is accounted for by Europe and Russia combined. Since 2008, the average annual rise in demand has been little over 3%.

The majority of the chocolate is melted into the liquor, which is then separated into cocoa solids and cocoa butter, or chilled and moulded into raw chocolate blocks. It's mostly used in chocolate making (typically in conjunction with additional cocoa butter).

Cocoa butter, or theobroma oil, is a light-yellow vegetable lipid obtained from cocoa beans. Fermenting, drying, roasting, stripping, and pressing cocoa beans provide cocoa butter.

Cocoa powder is used to flavour biscuits, ice cream, dairy drinks, and desserts. It's used to manufacture confectioner's coatings and frozen sweets, in addition to being used as a flavour.

Chocolate spread is a sweet chocolate-flavored paste that is commonly put on breads and toasts, as well as waffles, pancakes, muffins, and pitas.

Chocolate syrup is a sweet, chocolate-flavored condiment. It's commonly used as an ice cream topping or dessert sauce, or blended with milk to make chocolate milk, or blended with milk and ice cream to make a chocolate milkshake.

Increased manufacturing of confectionery syrup and chocolates will drive the worldwide cocoa products market. Increasing disposable income, improved retail distribution channels, increased availability of foreign brands, and the use of cocoa in snack food categories such as sweet biscuits and others are all likely to contribute considerably to market expansion. The demand for cocoa in scrubs, ointments, creams, facial masks, toners, and lotions is expected to remain strong.

The Indian chocolate market is predicted to reach US\$ 1.9 billion in 2020, making it one of the fastest-growing chocolate markets in the world. According to IMARC Group, the market would grow at a CAGR of 11.3 percent between 2021 and 2026. We're constantly monitoring and evaluating the pandemic's direct and indirect consequences, taking into account COVID-19's uncertainty.

India's strong economic growth has boosted per capita disposable incomes in recent years, propelling the chocolate sector to new heights. As a result, rather of buying chocolates for special occasions, individuals are buying them on a more frequent basis.

### PROJECT COST ESTIMATE

<b>CAPACITY:</b>	
<b>Cocoa Liquor</b>	: 2,000 Kgs Per Day
<b>Cocoa Butter</b>	: 974.4 Kgs Per Day
<b>Cocoa Powder</b>	: 512.8 Kgs Per Day
<b>Chocolate Spread</b>	: 530.2 Kgs Per Day
<b>Chocolate Syrup</b>	: 2,263.9 Kgs Per Day
<b>Plant &amp; Machinery</b>	: ₹ 1582 Lakhs
<b>Cost of Project</b>	: ₹ 2422 Lakhs
<b>Rate of Return</b>	: 26%
<b>Break Even Point</b>	: 39%

## Setting up uPVC and CPVC Pipes Business

**U**PVC is an acronym for un-plasticized polyvinyl chloride. It is also known as rigid PVC or UPVC. CPVC is an acronym for chlorinated polyvinyl chloride. It is similar to PVC but is more resistant to chemicals and heat.

### Uses and Applications

uPVC and CPVC pipes are commonly used in plumbing and irrigation applications. They are also used in the chemical industry, as they are resistant to most acids and bases. uPVC pipes are easy to install and require little maintenance, making them a popular choice for both

home and commercial use.

### Uses and Applications

uPVC and CPVC pipes are commonly used in plumbing and irrigation applications. They are also used in the chemical industry, as they are resistant to most acids and bases. uPVC pipes are easy to install and require little maintenance, making them a popular choice for both home and commercial use.

### Indian Market

CPVC Pipes and Fittings Market size was valued at USD 1491.9 Million in 2021 and is projected to reach USD 3407.6 Million by 2030, growing at a CAGR of 12.52% from 2022 to 2030.

### PROJECT COST ESTIMATE

<b>CAPACITY:</b>	
<b>CPVC Pipes 50 mm</b>	: 4 MT Per Day
<b>uPVC Pipes 150 mm</b>	: 8 MT Per Day
<b>Plant &amp; Machinery</b>	: ₹ 313 Lakhs
<b>Cost of Project</b>	: ₹ 714 Lakhs
<b>Rate of Return</b>	: 27%
<b>Break Even Point</b>	: 56%

**Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :**

**NIIR PROJECT CONSULTANCY SERVICES**

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi-110 007 (India). Tel. : 91-11- 23843955 • 23845886

Mob.: +91-9097075054 • 8800733955

Website : [www.niir.org](http://www.niir.org) • [www.entrepreneurindia.co](http://www.entrepreneurindia.co) • E-mail : [info@niir.org](mailto:info@niir.org) • [npcs.india@gmail.com](mailto:npcs.india@gmail.com)

# Set Up Your Own Maize Processing Plant with Cogeneration Plant

**M**aize is the third most important cereal/crop after wheat and rice, and it has a lot of processing possibilities due to its high nutritional value and economic use. Maize (sometimes called corn) is a cereal grass that is widely grown for food and animal feed. Maize is one of the most widely consumed foods in India. In India, annual maize production is at 21 million tonnes, with Karnataka, Andhra Pradesh, and Rajasthan producing the most. India is one of the world's leading maize producers, and it's a crop that can be cultivated all year in almost any agro-climatic zone inside its borders.

In recent years, maize planting has exploded in India, explaining its dominance as a starch source among processors. Maize is one of the most versatile crops in development, allowing it to thrive in a wide range of agro-climatic conditions. Because maize has the largest genetic production potential of all cereals, it is known as the "Queen of Cereals" around the world. Maize is utilised as a basic raw material in a wide range of industries, including starch, oil, protein, alcoholic drinks, food sweeteners, pharmaceuticals, cosmetics, film, textile, gum, packaging, and paper.

A maize processing factory, often known as a corn mill, plays an important role in commercial food production. The machinery at the plant grinds dry maize into corn meal or corn flour, which is then used to produce tortillas, breads, and cereals. The grain can also be fermented and distilled to produce ethanol fuel, or processed into syrups to sweeten carbonated beverages. A maize processing facility can do more than just transform corn into corn flour, cornmeal, or grits, depending on the type of machinery utilised and the degree of milling that occurs during processing. Despite the fact that these are all standard maize processing facility applications.

In India, almost 57 percent of maize produced is used to feed poultry and animals. Thirty-three percent is eaten, 9% is used to create starch and associated

products, and 1% is used as seed. In the United States and Europe, maize is mostly used to produce starch and other industrial products. Despite being one of the world's largest producers of maize, India's value addition in the form of processing is poor in comparison to more developed countries. In modern countries, a significant amount of starch is converted into high-value-added nutritional sweeteners including glucose syrup, dextrose, and fructose syrup.

From 2019 to 2024, the Indian corn starch market is predicted to grow at a CAGR of 3.9 percent, reaching \$1.37 billion in 2018. The easy availability of corn, as well as its wide range of applications in industries such as food and beverage, pharmaceuticals, animal feed, textiles, and paper, are propelling the India Corn Starch market forward. Starches are primarily consumed by the textile, paper, and construction industries, as well as the pharmaceutical business. Although the use of these derivatives in the food sector is growing slowly, the maize starch processing industry still has a lot of untapped potential.

In terms of both value and volume, North America is the most important market for corn starch. The maize starch market in Asia Pacific, on the other hand, is predicted to grow at the quickest rate in the coming year, with a CAGR of 6.4 percent. Corn starch demand is increasing throughout Asia Pacific, especially in ASEAN, China, and India, where large corn starch producers have lately invested heavily.

### PROJECT COST ESTIMATE

<b>CAPACITY:</b>	
<i>Maize Starch</i>	: 150 MT Per Day
<i>Liquid Glucose</i>	: 20 MT Per Day
<i>Maltodextrin</i>	: 18 MT Per Day
<i>Gluten as by Product</i>	: 33 MT Per Day
<i>Germ as by Product</i>	: 21 MT Per Day
<i>Fiber as by Product</i>	: 36 MT Per Day
<b>Plant &amp; Machinery</b>	: ₹ 136 Cr
<b>Cost of Project</b>	: ₹ 171 Cr
<b>Rate of Return</b>	: 21%
<b>Break Even Point</b>	: 32%

# Manufacturing Business Plan for Zinc Ingots

**Z**inc ingot is a white or gray color pure zinc metal, which is cast into a block or bar that is suitable for further processing of metal. The zinc ingot is produced using solid-state, crystallization, and ultra-high purification processes including sublimation.

### Uses and Applications

Zinc oxide is widely used in the manufacture of very many products such as paints, rubber, cosmetics, pharmaceuticals, plastics, inks, soaps, batteries, textiles and electrical equipment. Some application Galvanizing, Zinc Oxide, Die Castings, Alloys

### Industries

The rising demand for zinc ingots in the hot-dip galvanization steel will fuel the market growth. In the process of hot-dip

### PROJECT COST ESTIMATE CAPACITY

<b>Zinc Ingots (Purity 98%)</b>	: 6 MT Per Day
<b>Plant &amp; Machinery</b>	: ₹ 124 Lakhs
<b>Cost of Project</b>	: ₹ 863 Lakhs
<b>Rate of Return</b>	: 29%
<b>Break Even Point</b>	: 65%

galvanization, the steel objects are dipped in pool of the molten zinc ingots, so that the melted zinc ingots can be applied to all exposed surface of steel.

### Indian Market

The rising demand for zinc ingots in the hot-dip galvanization steel will fuel the market growth. In the process of hot-dip galvanization, the steel objects are dipped in pool of the molten zinc ingots, so that the melted zinc ingots can be applied to all exposed surface of steel.

# Plastic Waste Pyrolysis (Plastic to Oil Conversion)

**P**yrolysis is the chemical decomposition of organic substances by heating the word is originally coined from the Greek-derived elements pyro "fire" and lysis "decomposition". Pyrolysis is usually the first chemical reaction that occurs in the burning of many solid organic fuels, cloth, like wood, and paper, and also of some kinds of plastic. Anhydrous Pyrolysis process can also be used to produce liquid fuel similar to diesel from plastic waste.

Increasing industrialization and motorization has lead to a significant rise in demand of petroleum products. As these are the nonrenewable resources it is difficult to predict availability of these resources in future, resulting uncertainty in its supply and price and is impacting growing economies like India.

### PROJECT COST ESTIMATE

<b>CAPACITY:</b>	
<i>Pyrolysis Oil</i>	: 10 MT/Day
<i>Carbon (by product)</i>	: 3.33 MT/Day
<i>Gas (by product)</i>	: 2 MT/Day
<b>Plant &amp; Machinery</b>	: ₹ 197 Lakhs
<b>Cost of Project</b>	: ₹ 512 Lakhs
<b>Rate of Return</b>	: 26%
<b>Break Even Point</b>	: 58%

Many alternate fuels like Alcohols, Biodiesel, LPG, CNG etc have been already commercialized in the transport sector. Recent developments in recycled plastic and plastic waste to oil market indicate that policymakers and energy industry players in various regions, particularly in North America and Europe, are focusing on the commercialization of the technology. As a whole entrepreneur can venture in this field will be successful.

**SUBSCRIPTION RATE FOR INDIA—Single Copy ₹ 20/- , One Year ₹ 720/- (with Registered Post Charges)**

**OWNER, PUBLISHER, PRINTER & EDITOR : AJAY KUMAR GUPTA Printed at M/s. Balaji Offset Printers, 315/21, Daya Basti, Delhi 110 035  
PUBLISHED AT : 106 E, Kamla Nagar, Delhi-110 007 (India).**

**R.N.I. NO. 61509/95**

**DATE OF PUBLICATION : 19 EVERY MONTH**