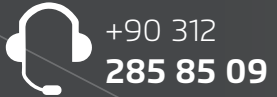




BEYOND  
THE  
FUTURE



nanografi.com



METU Technopolis  
Çankaya / Ankara TÜRKİYE

energy@nanografi.com



# Nanografi ENERGY

Metal-Air Battery Technology, Lithium and Carbon-Based Battery Materials,  
Battery Components, Battery Machines & Equipment

AHILATCI  
HOLDING





# *High-Tech* Battery Technologies & Solutions

Nanografi Energy offers advanced battery technologies, materials and chemicals, including **metal-air batteries, lithium and carbon-based solutions, anode and cathode materials and other battery components.**

Nanografi Energy provides a wide range of battery technologies and components by developing innovative and comprehensive solutions to meet the growing demands of various industries.

Metal-Air Battery Technology

Lithium Battery Materials

Carbon-Based Battery Materials

Other Battery Materials & Solutions

Battery Components - Battery Heater

Battery Machines & Equipment





# Metal-Air Battery Technology

Nanografi Energy develops **highly efficient, economical, durable and cross-compatible air cathodes for metal-air batteries (MABs)** and **next-generation air-breathing MABs**, which have potential applications in electric vehicles, grid energy storage, electronics and aircraft, thereby supporting the shift towards sustainable energy sources and contributing the energy sector.

## Products

Iron-Air Battery

Aluminum-Air Battery

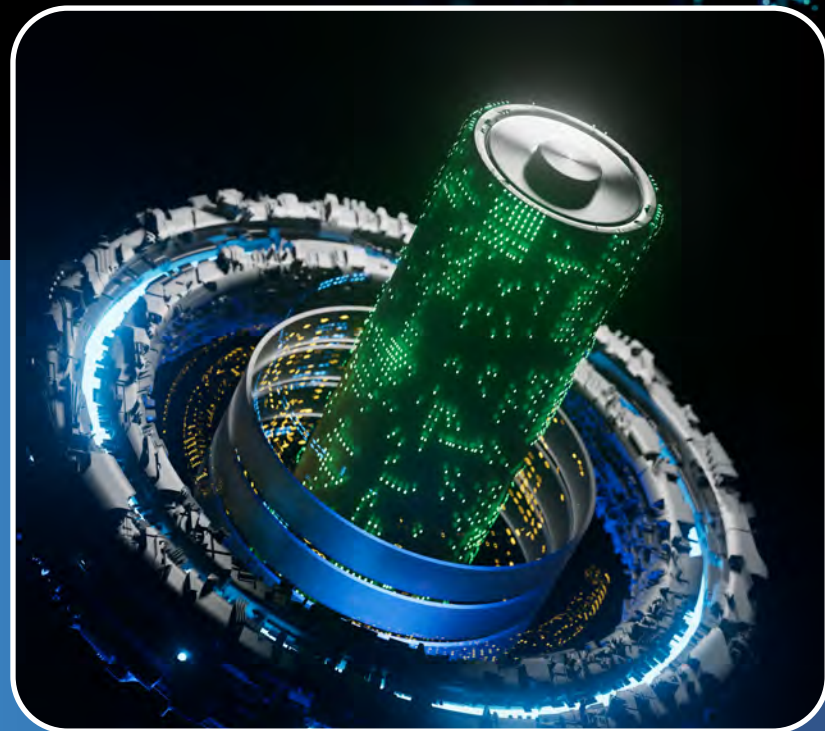
Zeolitic Imidazolate Framework-9

Zeolitic Imidazolate Framework-67

Zeolitic Imidazolate Framework-8

Cobalt Ferrite ( $\text{CoFe}_2\text{O}_4$ )

Nitrogen Sulfide Doped Graphene



# Lithium Battery Materials

Nanografi Energy's Lithium Battery Materials, featuring advanced anode and cathode materials, **optimize performance, efficiency and sustainability** across industries, high-technology institutes, universities and companies, utilizing cutting-edge technology to ensure efficient, sustainable and cost-effective solutions while adhering to Nanografi's high-quality standards.

## Products

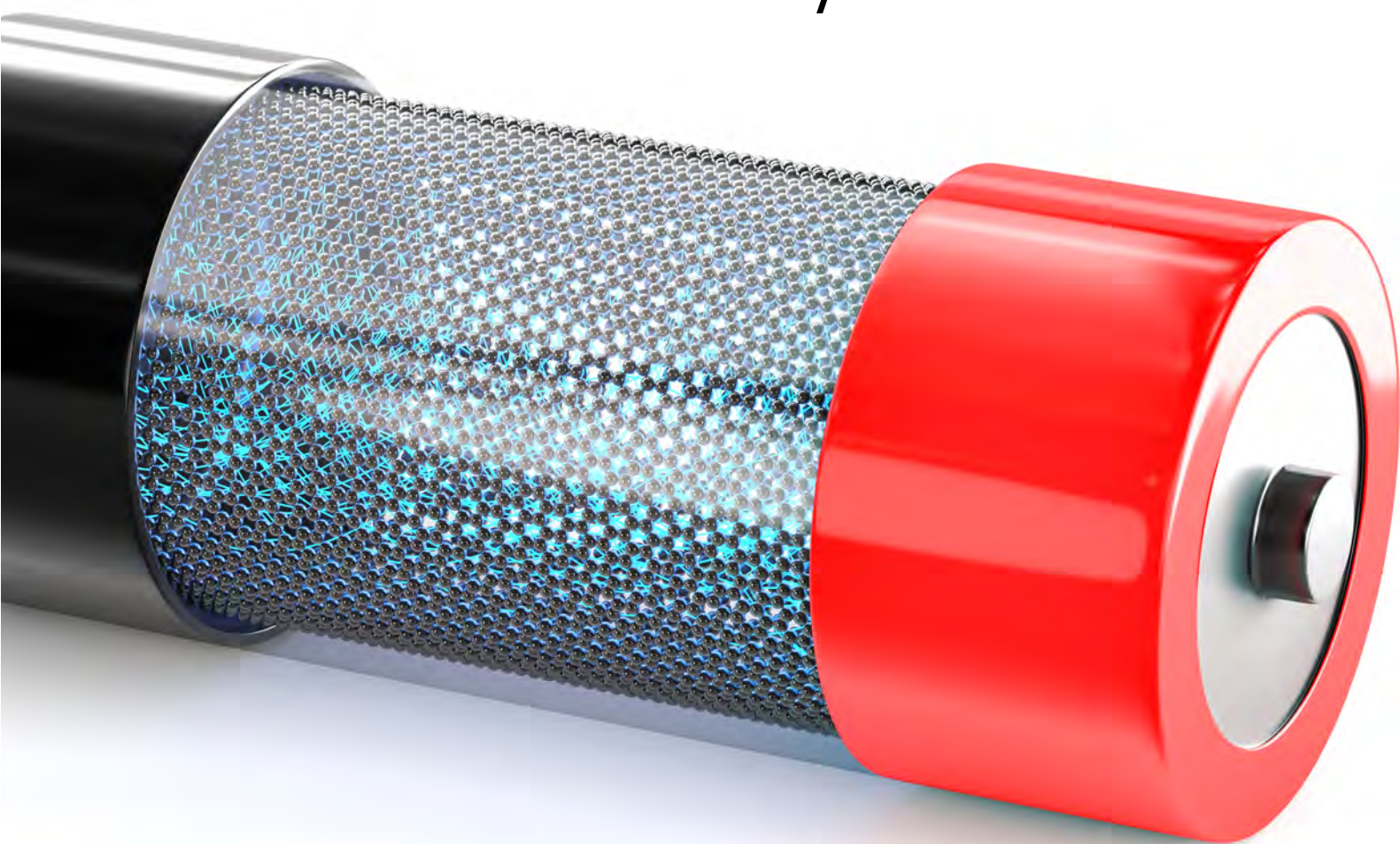
Anode Materials

Cathode Materials





# Carbon-Based Battery *Materials*



Nanografi Energy's Carbon-Based Battery Materials are engineered to enhance battery performance, durability and efficiency. These components **improve batteries' electrical conductivity, thermal stability and mechanical strength** by utilizing advanced carbon materials such as graphene and carbon nanotube.

## Products

Holey Super Graphene

Graphene

Carbon Nanotube

Carbon Black

Graphite

# Holey Super Graphene in Supercapacitors

The cutting-edge Holey Super Graphene, developed in Nanografi's high-tech laboratories, **enhances the energy and power density of supercapacitors, extends cycle life and improves charging speeds** thanks to its uniformly distributed nano-sized holes, ultra-high conductivity, high surface area and superior electrochemical performance.

Holey Super Graphene's porous structure and high surface area provides a more efficient performance by **eliminating the risk of ion transport kinetics degradation** that can occur in supercapacitors.



High Power Density



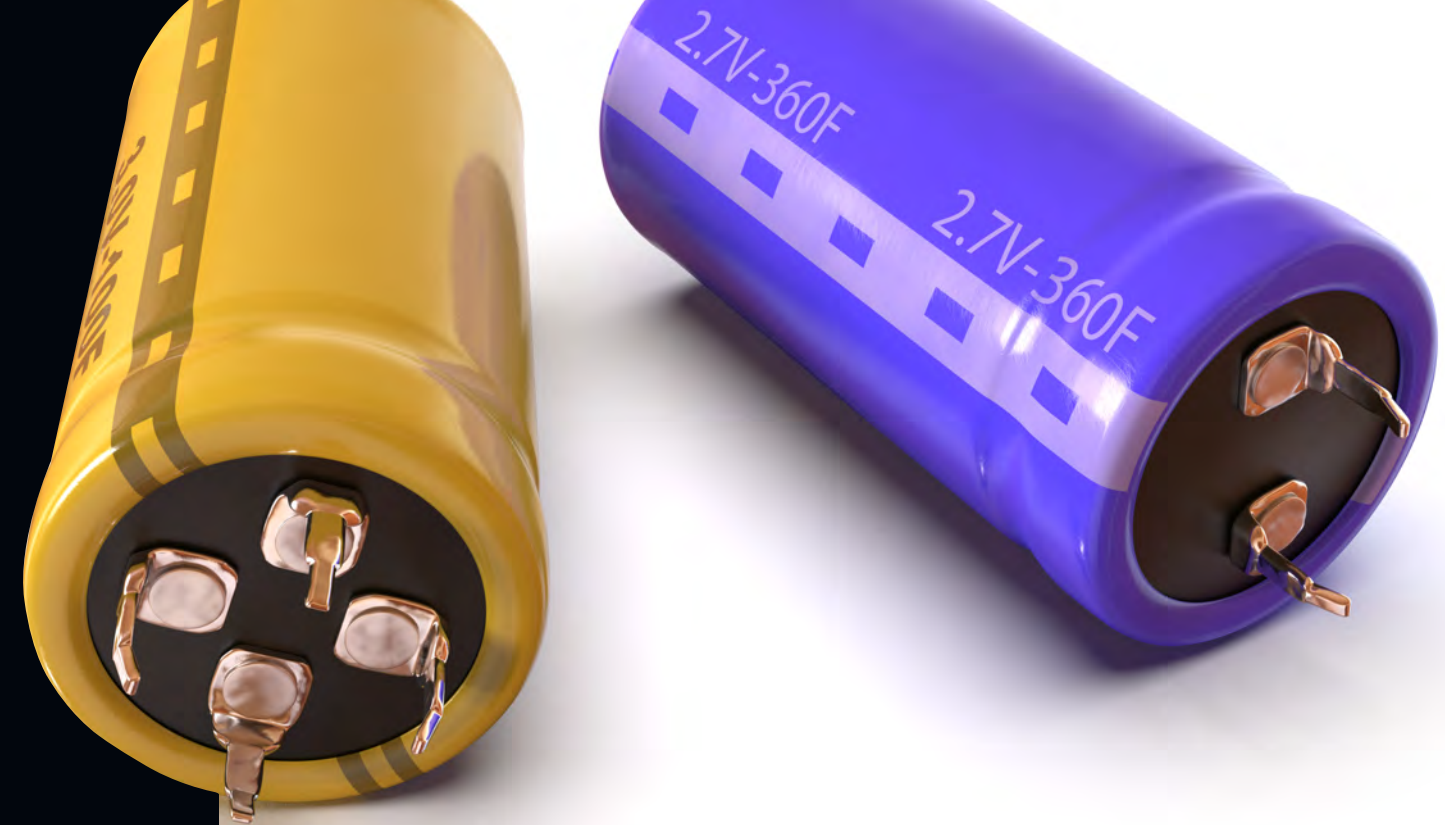
Fast Charge  
and Discharge



High Capacitance



Long Life



## Applications

Energy Storage Systems

Portable Electronics

Electric Vehicle Charging Stations

Military and Defense Systems

Electric Vehicles

Telecommunications



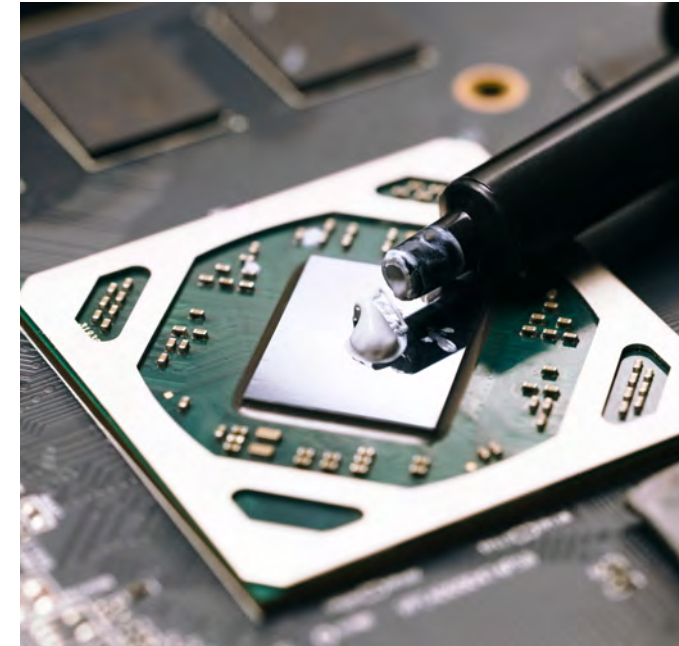
# Other Battery Materials & Solutions



Nanografi Energy's other battery materials, including **coin cell**, **pouch cell**, **cylinder cell** and **more**, are essential for energy storage and electronics, offering **reliable power**, **superior insulation** and **efficient thermal management**, all while upholding Nanografi's high-quality standards to drive innovation.

## Products

- Coin Cell
- Lithium Chips
- Electrolyte
- PVDF/PTFE/SBR Binder
- Al Laminated Film
- Al/Ni Tabs
- Al/Ni Strip
- 18650 Coin Cell
- Thermal Adhesive Paste
- Strapping Tapes



# Battery Components

Nanografi Energy's tailor-made battery components, including battery separators, battery foils and more, **enhance performance and safety by ensuring efficient ion flow, preventing short circuits and maintaining optimal efficiency** with excellent conductivity and durability.

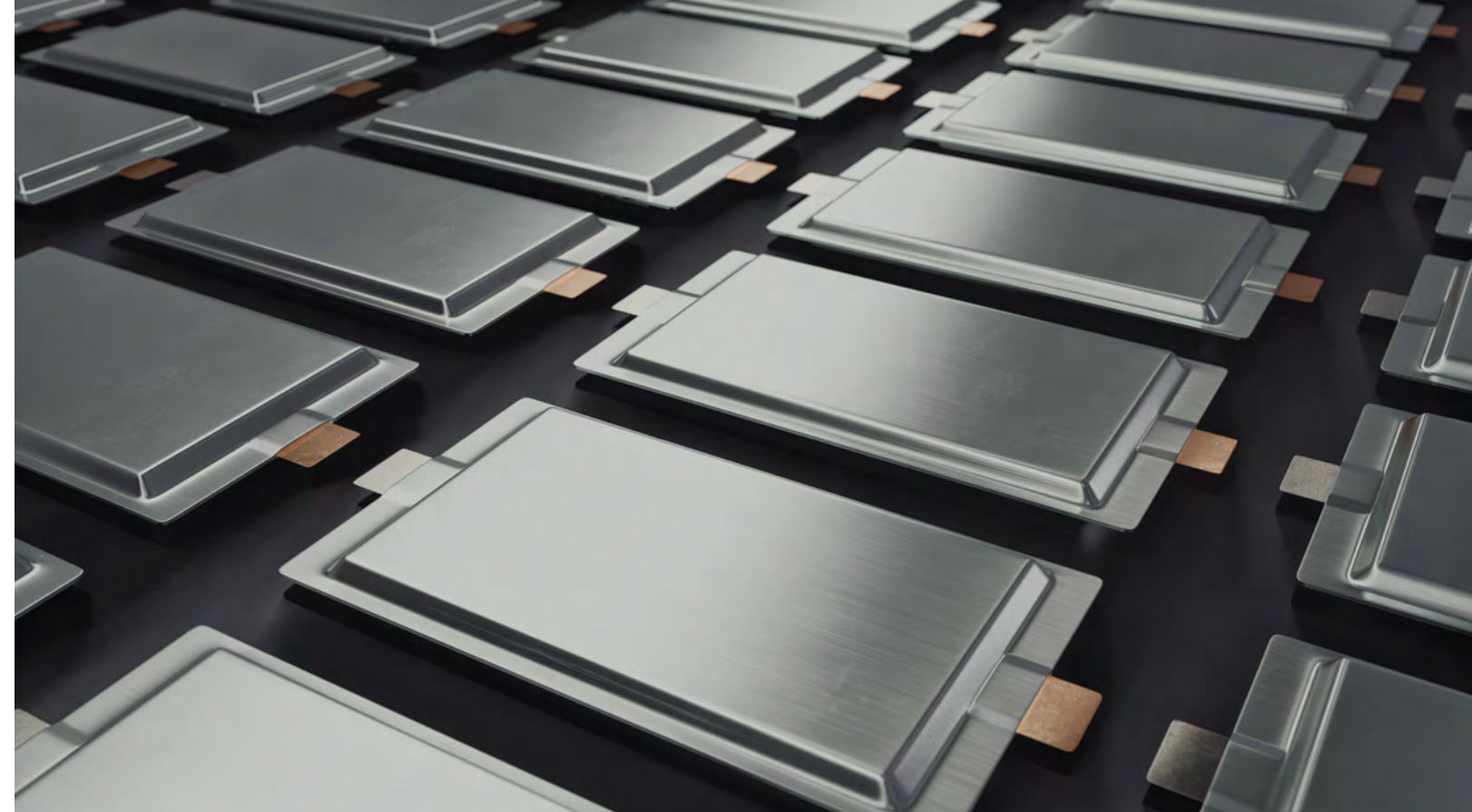
## Products

Battery Separators

Battery Foils

Porous Battery Foam

Battery Heater

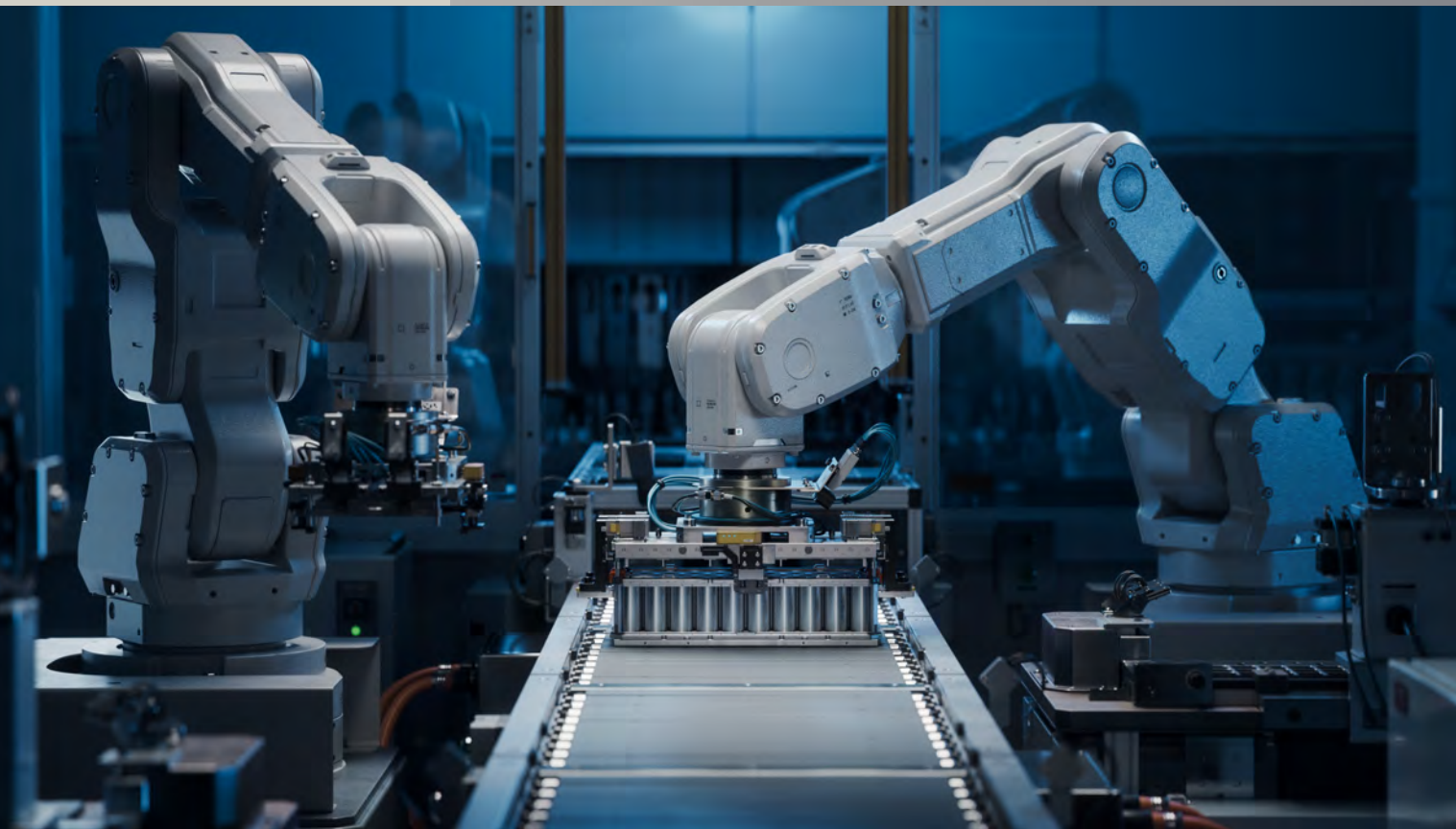


# Battery Heater

Nanografi Energy's Battery Heater, customizable to meet specific needs, **enhances battery performance, reliability and longevity in extreme conditions**, maintaining efficiency from **-60 to 250 °C** and **up to 10,000 hours** of usage.



# Battery Machines & Equipment



Nanografi Energy's Battery Machines and Equipment provide, adhering to Nanografi's high-quality standards and international benchmarks, **ensuring precision, reliability and versatility for advanced research and development needs.**

## Products

Hydraulic Crimping Machine

Coin Cell Punching Machine

Pneumatic Die Cutting Machine

Electric Coin Cell Hydraulic Crimping Machine

Coin Cell Battery Testing System

Pneumatic Cylindrical Battery Sealing Machine

Large Automatic Film Coater

# Global Energy

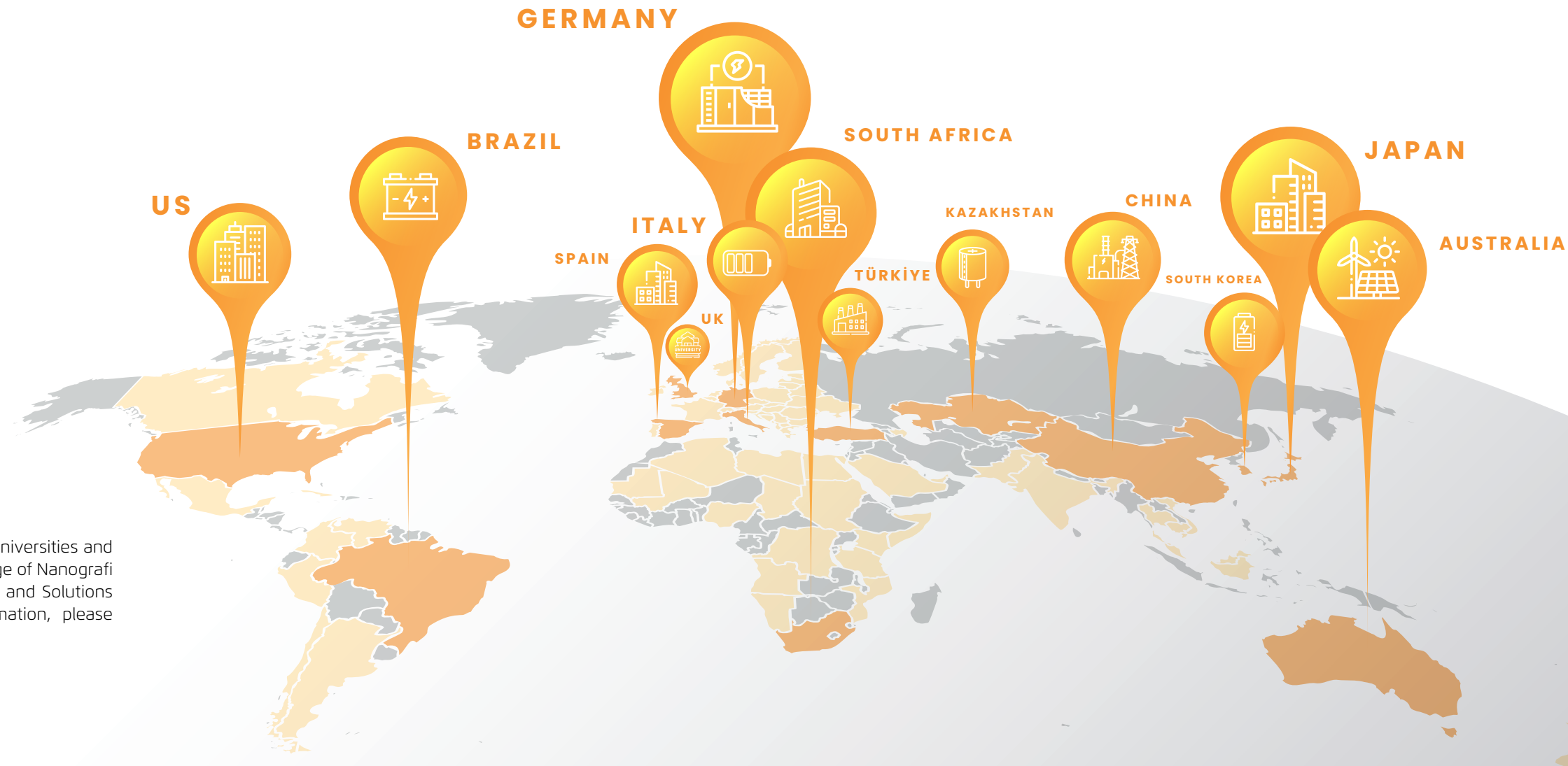
Network *by Nanografi*

Export to **100+ Countries**

**10,000+** Global Solution Partners

**High-Quality** Battery Materials and Solutions

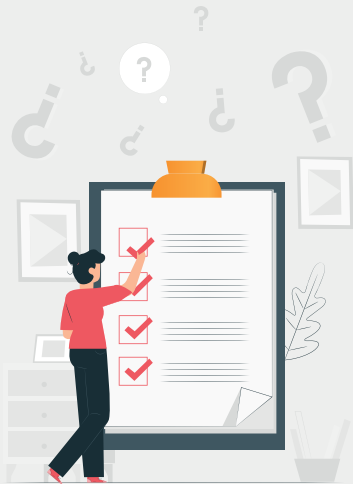
**High-Tech Facilities** and Infrastructure



**Note:** Some of the high-tech institutes, universities and companies worldwide that take advantage of Nanografi Energy's Battery Technologies, Materials and Solutions are marked. For more detailed information, please contact us at [energy@nanografi.com](mailto:energy@nanografi.com)



# Strategic Cooperation Roadmap



Identify  
Your Need

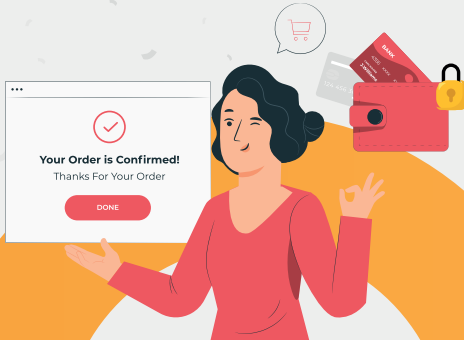
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& Solutions

# Discover *Nanografi*

**Nanografi**, as a subsidiary of **Ahlatci Holding**, redefines standards over 40+ years of experience in its international operations with an approach **focused on scientific and technological development, through transparency, accountability, expert teams, high scientific adaptability and technological capabilities** that support sustainable development.

Nanografi leads the global competition with its teams of experts and innovative approach in advanced materials, R&D, smart tech, chemicals, mechanics and advanced engineering projects and plant installation, especially with **Nanografi Energy's high-technology battery technologies and solutions.**

Nanografi Energy department, operating under Nanografi, focuses on **developing battery technologies and materials, including metal-air battery technology, anode and cathode materials, lithium and carbon-based solutions and other essential components and equipment**, providing comprehensive and innovative solutions.

**Nanografi Energy contributes to the development of sustainable energy and battery technologies through innovation-centered high-tech laboratories, solution-oriented approach and tailored high-capacity production infrastructure adaptable to any scale.**

