

Suzhou Newmat NanoTechnology Co.,Ltd

Advanced Powder Material Solution Provider

Dedicated to providing advanced powder
material solutions



Newmat

Empower Every Activate

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01

Company Profile



Suzhou Nemat NanoTechnology Co.,Ltd

Located in Zhangjiagang, Suzhou, our company is an innovative enterprise specializing in the research, development, design, manufacturing, and sales of fluidized bed reactors for small-scale experiments, pilot trials, and industrial applications.

By leveraging fluidization technology, we pioneer innovative approaches to offer superior equipment processes and technologies for silicon-carbon anodes, carbon nanotubes, activated porous carbon, coating modifications of cathode and anode materials, color-changing inks, noble metal coatings, pharmaceutical sustained-release systems, and precision-loaded catalysts. This drives the continuous upgrading of products.



Corporate Mission

Endow Powder Materials with New Value



Corporate Vision

Becoming a World-Class Supplier of
Advanced Powder Equipment

Cooperative Key Customers

Client

◉ Silicon-Carbon Anodes Materials



◉ Porous Carbon





◉ 3D Printing



◉ Battery Cells



◉ Universities & Research Institutions



◉ Solid-State Electrolytes



◉ Carbon Nanotubes



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苏州纽姆特纳米科技有限公司
Suzhou Newmat NanoTechnology Co., Ltd.

02

Equipment Center





Fluidized Bed Chemical Vapor Deposition Reactor (FB-CVD)

The FB-CVD reactor is one of our company's popular products. In the reactor, the powder material is fluidized by the carrier gas, and then processes such as gas cracking and coating are carried out.


✓ Advantages


- High Mass Transfer Coefficient
- Uniform thermal and flow field
- More uniform coating
- Batch continuous production
- Good sealing performance and high safety
- Integrated explosion-proof design
- Automated control
- Large production capacity
- High production efficiency
- Mature commercial equipment
- Significantly improved stability
- Can discharge materials at high temperatures



Model: FBCVD-10

 Effective Reaction Volume: $1\text{L} \leq \text{Sample Capacity} \leq 3\text{L}$

 Gas Sources: H_2 , Ar, N_2 , O_2 , CH_4 , C_2H_2 , etc.


 Operating Temperature: $\leq 850^\circ\text{C}$
(Higher temperatures can be customized)


 Material Size Requirement: $D_{50} \geq 2\mu\text{m}$




Model: FBCVD-20

 Effective Reaction Volume: $5\text{L} \leq \text{Sample Capacity} \leq 8\text{L}$

 Gas Sources: O_2 , N_2 , Ar, water vapor, CO_2 , CH_4 , Silane, C_2H_2 , C_3H_6 , etc.

 Operating Temperature: $\leq 850^\circ\text{C}$
(Higher temperatures can be customized)

 Material Size Requirement: $D_{50} \geq 2\mu\text{m}$



Model: FBCVD-100



Effective Reaction Volume:
25L ≤ Sample Capacity ≤ 40L



Gas Sources: O₂, N₂, Ar, water vapor, CO₂, CH₄, Silane, C₂H₂, C₃H₆, etc.



Operating Temperature: ≤850°C
(Higher temperatures can be customized)



Material Size Requirement: D50 ≥ 2 μm



Model: FBCVD-500



Effective Reaction Volume: 125L ≤ Sample Capacity ≤ 200L



Gas Sources: O₂, N₂, Ar, water vapor, CO₂, CH₄, Silane, C₂H₂, C₃H₆, etc.



Operating Temperature: ≤850°C
(Higher temperatures can be customized)



Material Size Requirement: D50 ≥ 2 μm



Applied Industries



► Silicon-Carbon Anode



► Porous Carbon Activation



► Materials Coating



► Oxygen-free sintering



Fluidized Bed Spray Nano Coating (FB-SDNC)

The soluble coating materials are dissolved and then sprayed in the liquid phase to coat the materials that are fully fluidized by the carrier gas.

✓ Advantages

- The combination of finer mist droplets and the fluidized bed results in more uniform coating.
- A wider range of coating materials can be selected.
- Industrial-scale fluidized beds can achieve continuous production.
- The equipment is equipped with automated control.

🔧 Specifications

🔥 Effective Reaction Volume: 3-1000 L	📄 Applicable Powder Materials: Graphite, metal oxides, metallic powders, ceramic powders, etc.
🌬 Gas Sources: N ₂ , Ar, air, etc.	📄 Operating Temperature of the Reaction System: ≤300°C
⚙ Material Size Requirement: ≥1 μm	🔥 Spray Operation Temperature: Ambient temperature spraying

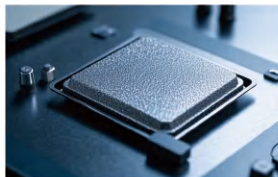
🏠 Applied Industries



► Lithium Iron Phosphate (LFP)



► NCM/NCA Cathode Coating



► Semiconductor Coating




► Petroleum Coke Coating


Dual-Bed Fluidized Bed Reaction System for CNT (Carbon Nano Tube) production



This device is a dual-bed fluidized bed reaction system, mainly used for preparing different types of carbon nanotube materials by thermally cracking carbon source gases under the action of oriented catalysts.

Specifications

 Effective Reaction Volume: 10-10000L,
Customized according to requirements

 Gas Sources: N_2 , Ar, H_2 , O_2 , CH_4 , C_2H_2 ,

 Operating Temperature: $\leq 850^\circ C$

Advantages

- High production efficiency and large output
- Excellent physical and chemical properties of products
- Flexible control of product specifications
- Easy to operate and maintain
- Environmentally friendly

Powder Atomic Layer Deposition Equipment (FB-ALD)

Traditional ALD processes are only applicable to the deposition on sheet materials, while FB-ALD can achieve atomic/molecular-level precision coating and deposition on powder materials.

✓ Advantages

- High-precision deposition process
- Adjustable coating thickness
- Suitable for materials with high aspect ratios
- Ultra-uniform coating of powder materials
- A variety of materials can be deposited
- Low reaction temperature
- High-purity coatings
- High degree of automated control



📦 Applied Industries



Coating of Lithium-ion Battery Electrode Materials



Enhancing Catalyst Performance



Aluminum Oxide Coating



Silicon Dioxide Coating



03

Integrated Solutions

Advanced Powder Materials Manufacturing Solutions

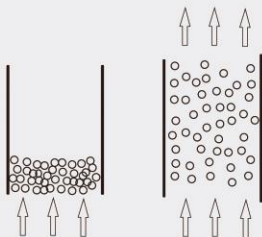


Diagram for Fluidization Technology

1、Silicon-Carbon Anode Solution



3C Products

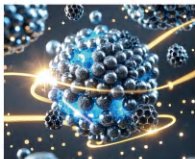


Low-Altitude Economy



Electric Vehicles

2、Porous Carbon Activation Solution



Silicon-Carbon Anode



Biomedical



Catalyst

3、Battery Materials Solution



Lithium-ion Battery Material Manufacturing



Sodium-ion Battery Material Manufacturing

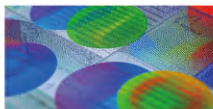


Solid-state Material Manufacturing

4、Other Material Solutions



3D Printing Material Post-processing



Photochromic Ink Manufacturing



Pearlescent Pigment Manufacturing

5、Customized Equipment Manufacturing Solutions



Technical Consultation



Customized requirements



Equipment Fabrication



Acceptance confirmation

04

Integrated Solutions

Support Service

Technical Training Programs

To ensure that your employees can operate and manage the equipment efficiently, we provide professional training. Through this training, your employees will quickly master the operation skills and maintenance key points of the equipment, achieve efficient operation, reduce problems caused by improper operation, and further improve production efficiency.

Equipment and Process Training

The training content covers the practical operation of equipment and processes, and explains their working principles and operation methods in detail. This practice-oriented training method can ensure that the client's operators are proficient in the operation skills of equipment and processes.



Post-Sales Service

We are committed to providing customers with comprehensive and high-quality after-sales services, ensuring that you can enjoy an excellent service experience before and after purchase.



Pre-Sales Services

Tailor-made exclusive after-sales service plans according to your specific needs.

Rapid Response & Maintenance

2-hour rapid response, spare parts shipped within 4 hours,



Continuous follow-up and maintenance

Our services do not end with product delivery. After the product is delivered, we will manage and maintain the entire product life cycle.



Real-time Accident
Monitoring



Emergency Response



Preparation of Manpower,
Machinery, Materials, and Protocols



苏州纽姆特纳米科技有限公司
Suzhou Newmat NanoTechnology Co., Ltd



Laboratory

3000 m²

Laboratory Floor Area

10 Sets

Equipped with experimental
and testing facilities.

1800 Times

The approximate number
of experiments conducted annually is...



Our laboratory is a place where knowledge, technology, and innovative ideas blend deeply. It is like a lighthouse in the vast ocean of scientific research, illuminating the way for the exploration and development of cutting-edge technologies and bringing reliable and outstanding experimental experiences to every scientific research partner.





Assist in finding the most suitable technical route for projects.

There is a high-quality and professional scientific research team consisting of more than 10 members.

Team members have extensive experience and profound academic attainments.

Uphold the scientific research spirit of innovation, rigor, and cooperation.

It is equipped with an experimental operation area, a precision instrument area, a sample and equipment storage area, etc.



Rapidly respond to experimental requirements.



Provide technical support for experiments.



Carry out the experimental process.



Feed back the experimental results.



Newmat Official Website



Wechat Follow Newmat

Create Value for Customers
Create Opportunities for Employees
and Generate Benefits for Society

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