Technical Data Sheet

ACS Material Nitrogen-doped Graphene Powder

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1. Preparation Method

Chemical Vapor Deposition (CVD) Method

2. Characterizations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BET surface area (m$^2$/g)</td>
<td>500 ~700</td>
</tr>
<tr>
<td>Electrical Conductivity (S/m)</td>
<td>&gt;1000 (characterized at the density of 0.3 g/cm$^3$)</td>
</tr>
<tr>
<td>Layers</td>
<td>1-5 atomic layer graphene nanosheets</td>
</tr>
<tr>
<td>Lateral size (µm)</td>
<td>0.5-5</td>
</tr>
<tr>
<td>Carbon (at %)</td>
<td>~ 88.0</td>
</tr>
<tr>
<td>Nitrogen (at %)</td>
<td>1.0-3.0</td>
</tr>
<tr>
<td>Oxygen (at %)</td>
<td>7.0-7.5</td>
</tr>
</tbody>
</table>

Typical SEM Image of ACS Material N-doped Graphene (1)
Typical SEM Image of ACS Material N-doped Graphene (2)

Typical TEM Image of ACS Material N-doped Graphene (1)
Typical TEM Image of ACS Material N-doped Graphene (2)

Typical TEM Image of ACS Material N-doped Graphene (3)
3. Application Fields

1) Supercapacitors
2) Catalyst
3) Solar energy
4) Graphene semiconductor chips
5) Conductive graphene film
6) Graphene computer memory
7) Biomaterials
8) Transparent conductive coatings

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