

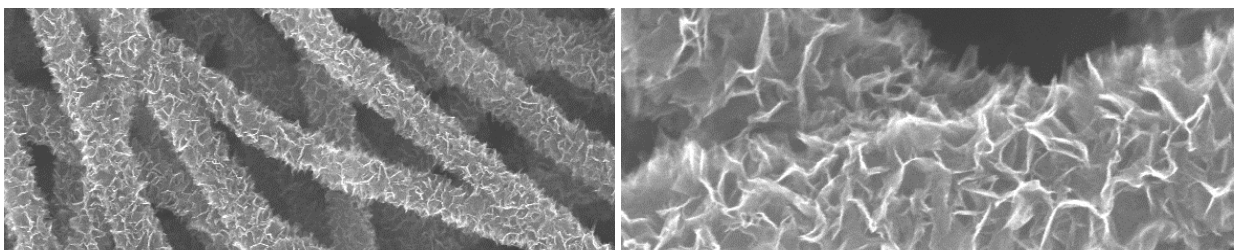
Vertical graphene composited carbon nanofiber films

Vertical graphene composited carbon nanofiber films (VG01)

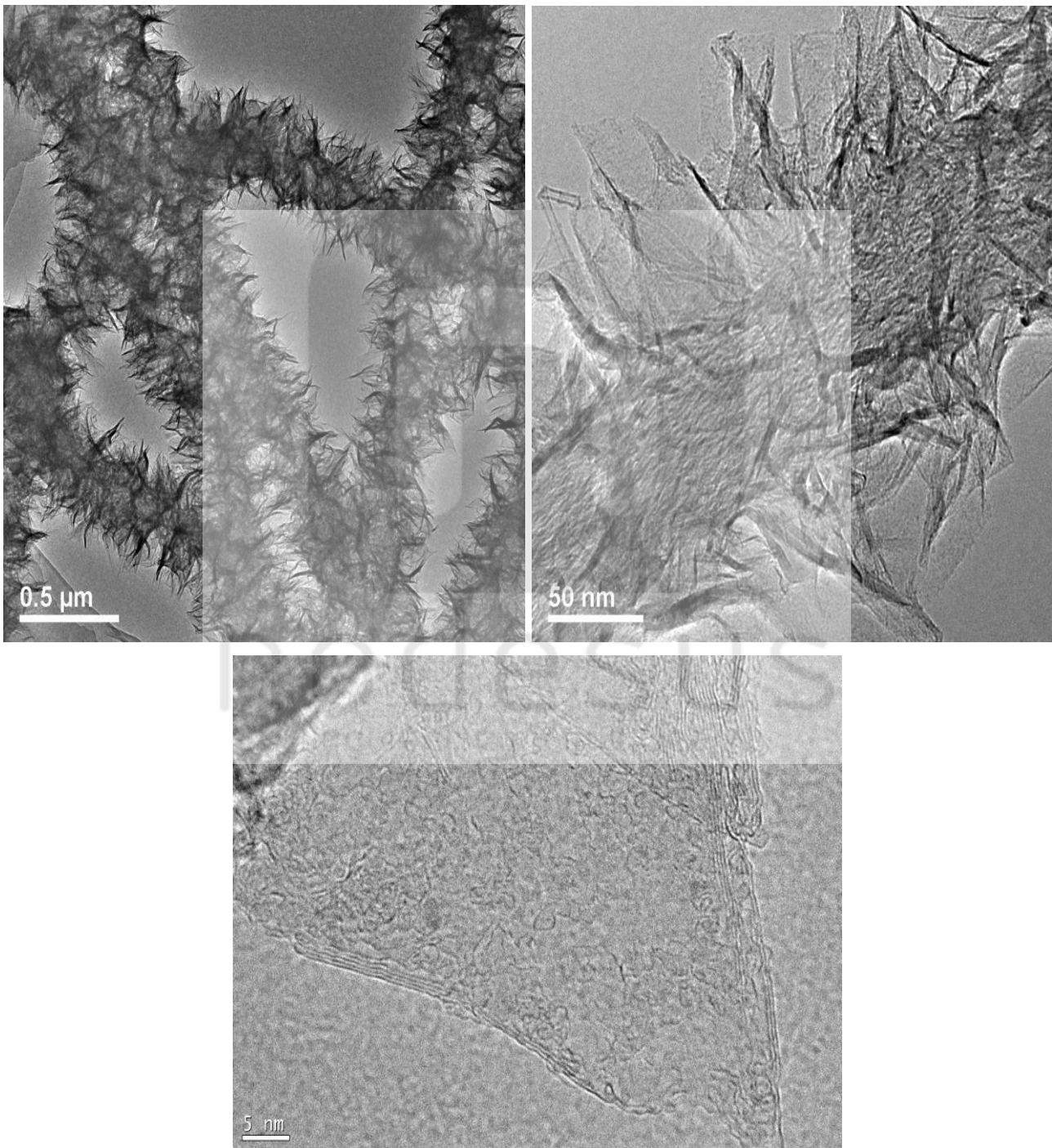
3DG fiber films are prepared by growing vertical graphene sheets on the surface of electrospun carbon nanofibers by chemical vapor deposition. In the fibers, graphene sheets grow along the radial direction of the fibers. The gaps between adjacent graphene sheets in the array are generally below 100 nm. The height of the graphene sheets is as high as several hundred nanometers. Their edges are concentrated on the fiber surface. An ideal 3DG structure is formed by growing the vertical graphene sheets on the fibers. It has application value in various fields, such as electrochemical electrodes, catalyst support, current collector for batteries/supercapacitors, thermally conducting/electrically conducting/high-strength composites, Li/Na/S supports, flexible conductor, electromagnetic shielding, sound absorption, energy storage, catalysis, adsorption and purification, etc.



Appearance of vertical graphene composited carbon nanofiber films



Vertical graphene composited carbon nanofiber films

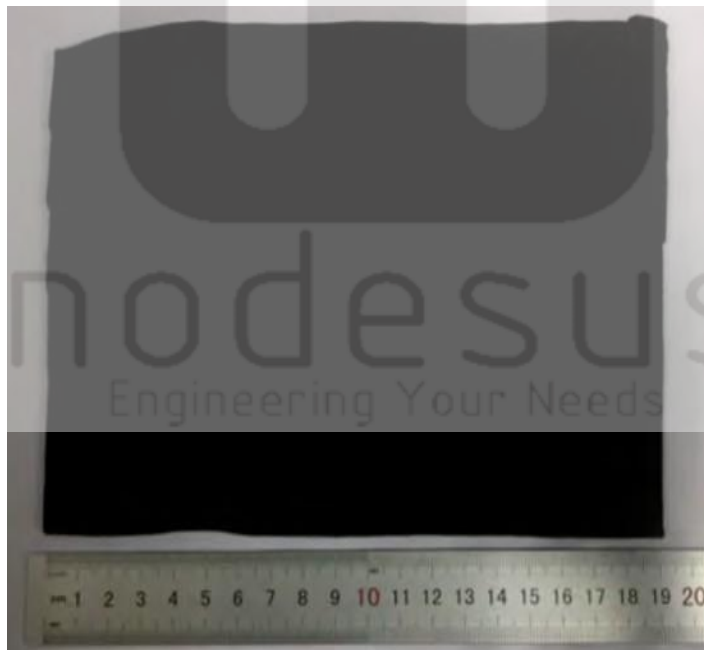


TEM images of vertical graphene composited carbon nanofiber

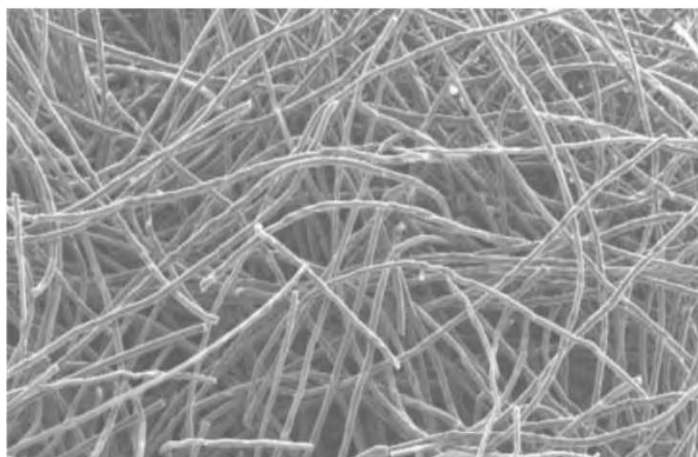
Vertical graphene composited carbon felt

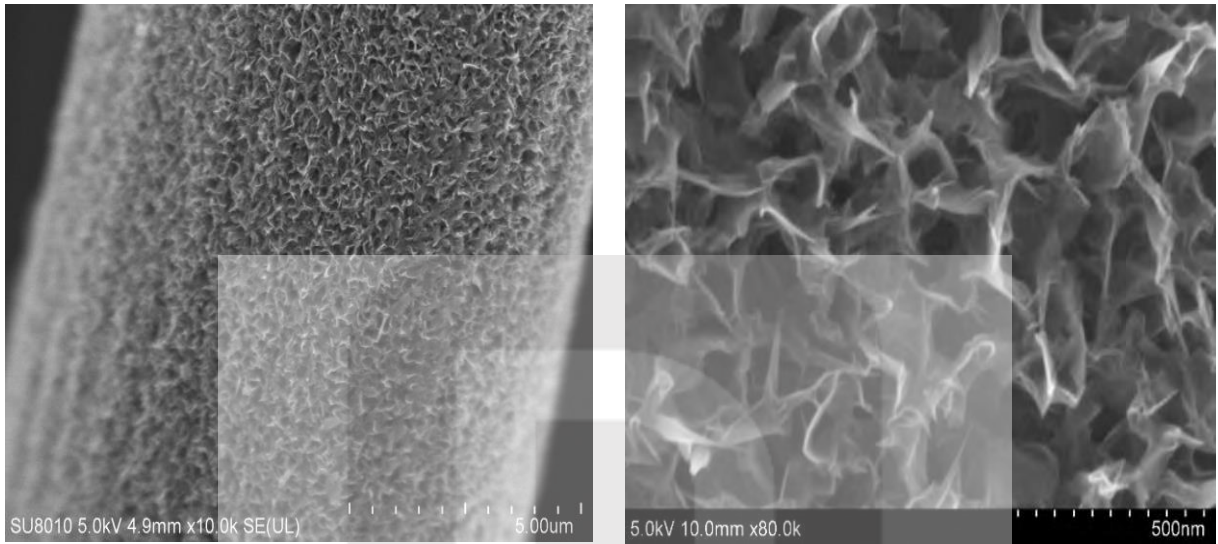
Vertical graphene composited carbon felt ((VG02)

The vertical graphene composited carbon felt is prepared by growing vertical graphene sheets on the carbon fibers of the felt by chemical vapor deposition method. It can be widely used as electrochemical electrodes, catalyst support, Li/Na/S supports, current collector of batteries/supercapacitors, thermally conducting/electrically conducting/high-strength composites, flexible conductor, electromagnetic shielding, sound absorption, energy storage, catalysis, adsorption and purification, etc.

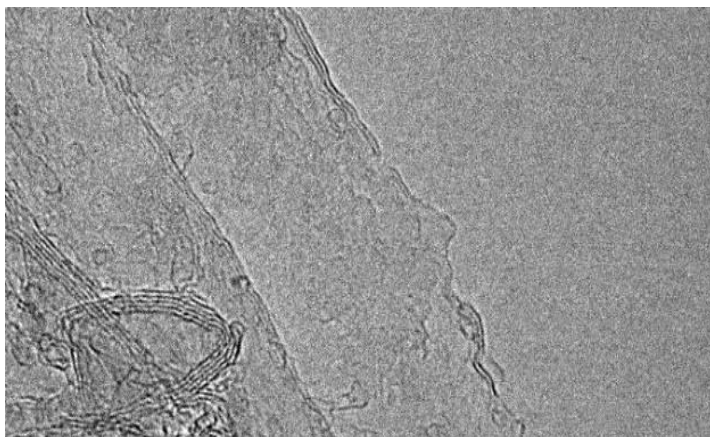
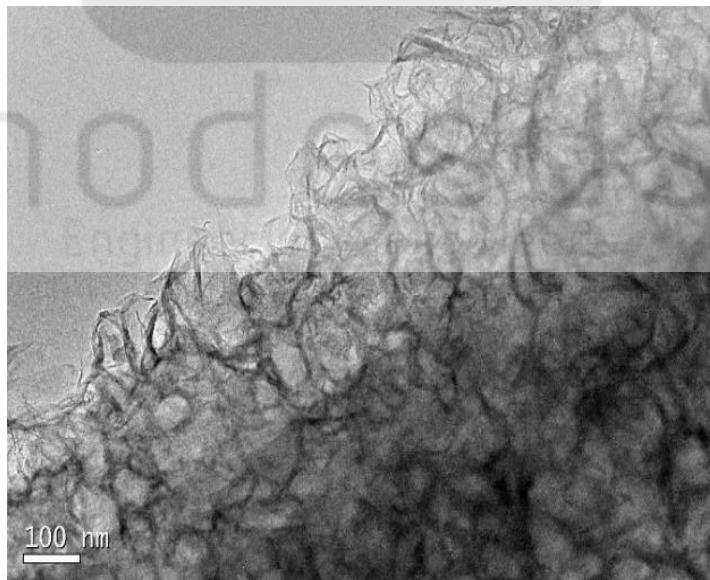


Appearance of vertical graphene composited carbon felt





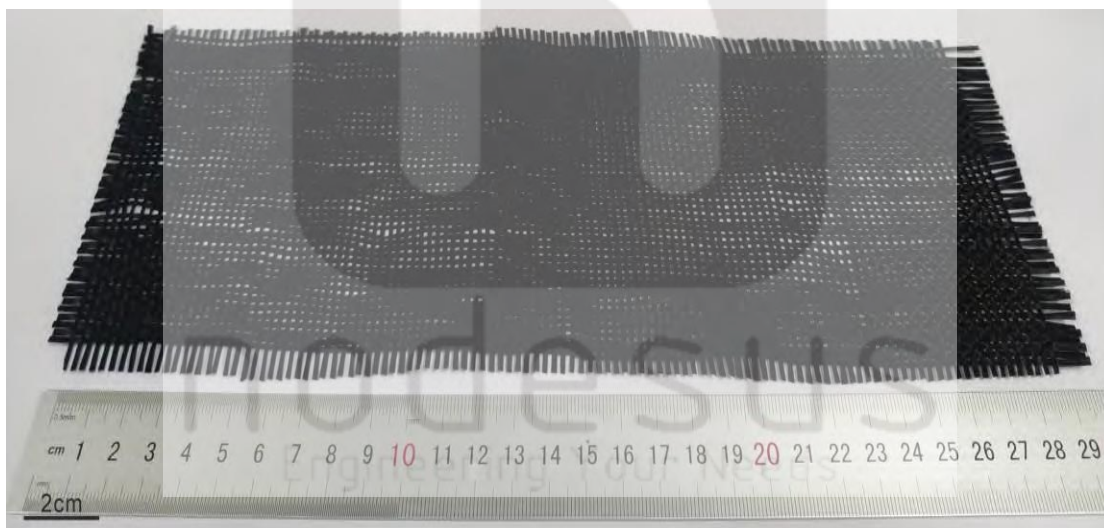
SEM images of vertical graphene composited carbon felt



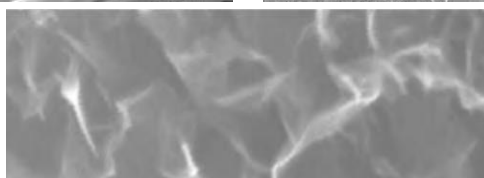
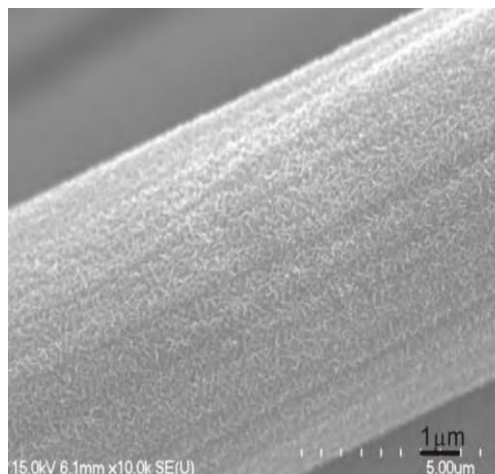
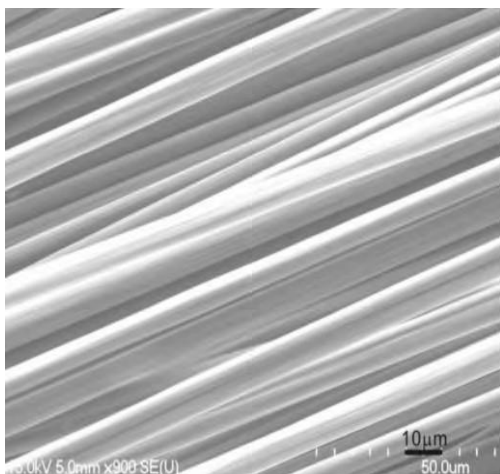
Vertical graphene composited carbon cloth

Vertical graphene composited carbon cloth ((VG03))

The vertical graphene composited carbon cloth are prepared by growing vertical graphene sheets on the carbon cloth by chemical vapor deposition. It can be widely used as electrochemical electrodes, catalyst support, current collector of batteries/supercapacitors, thermally conducting/electrically conducting/high-strength composites, Li/Na/S supports, flexible conductor, electromagnetic shielding, sound absorption, energy storage, catalysis, adsorption and purification, etc.



Appearance of vertical graphene composited carbon cloth



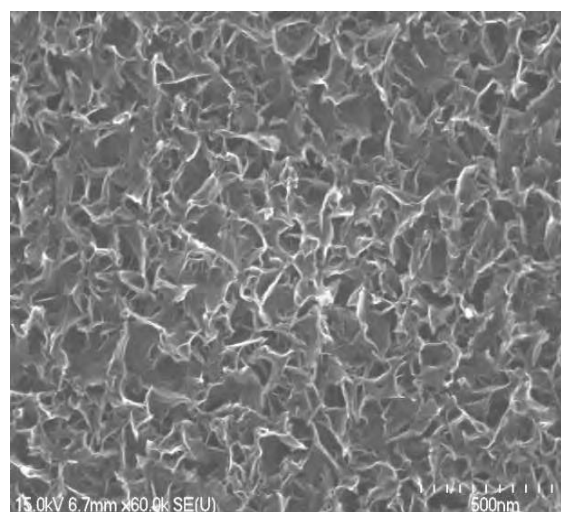
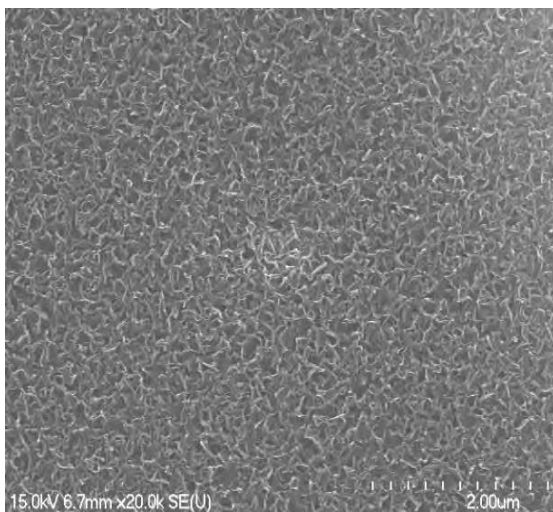
Vertical graphene composited graphite foil

Vertical graphene composited graphite foil ((VG04))

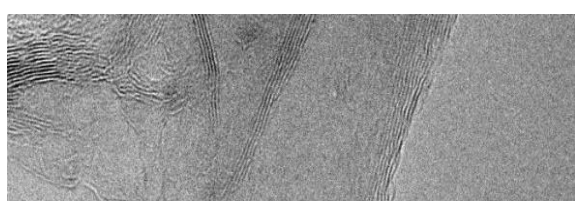
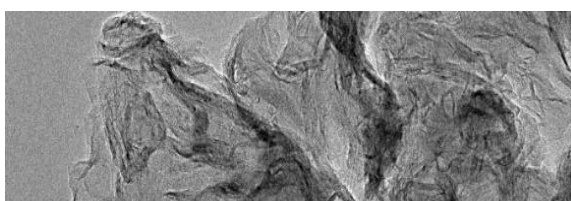
The vertical graphene composited graphite foil is prepared by growing vertical graphene sheets on graphite foil by chemical vapor deposition. It can be widely used as electrochemical electrodes, catalyst support, current collector of batteries/supercapacitors, Li/Na/S supports, thermally conducting/electrically conducting/high-strength composites, flexible conductor, electromagnetic shielding, sound absorption, energy storage, catalysis, adsorption and purification, etc.



Appearance of vertical graphene composited graphite



SEM images of vertical graphene composited graphite



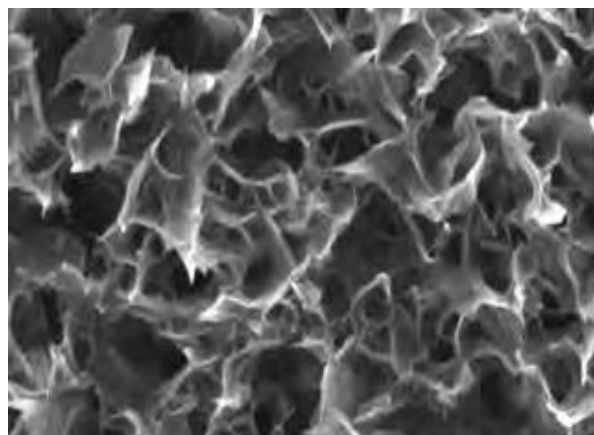
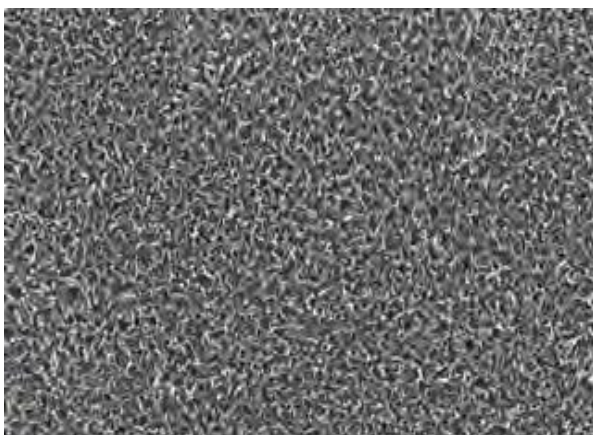
Vertical graphene composited ultra-thin graphite film

Vertical graphene composited ultra-thin graphite film (VG05)

Thickness 20-30 μ m, vertical graphene sheets on surface, highly flexible, high electrical conductivity (2×10^6 S/m). Application: electromagnetic shielding, thermal conducting, flexible electrode, flexible conductor, catalyst support, etc.



Appearance of vertical graphene
composited ultra-thin graphite film



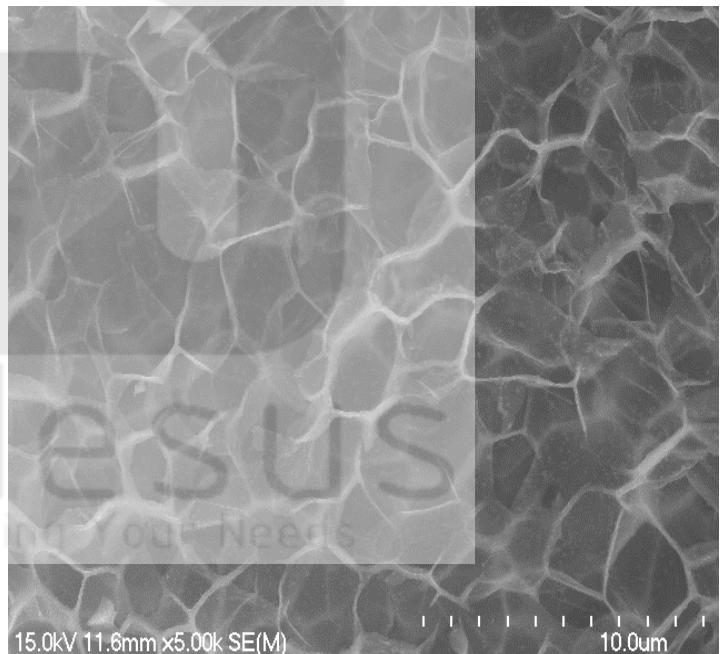
Graphene structured continuous block porous carbon

Graphene structured continuous block porous carbon (VG06)

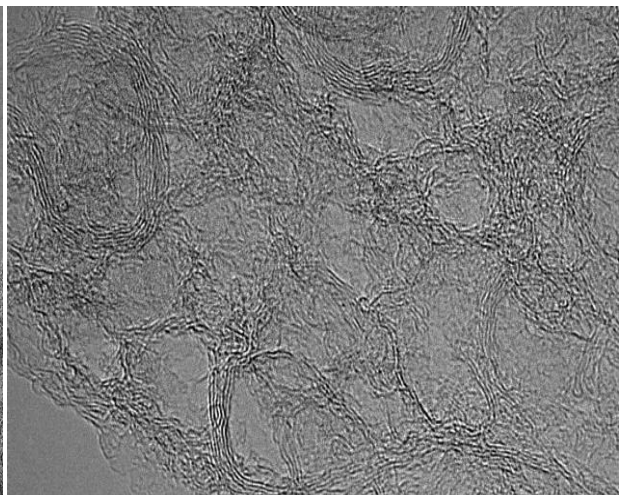
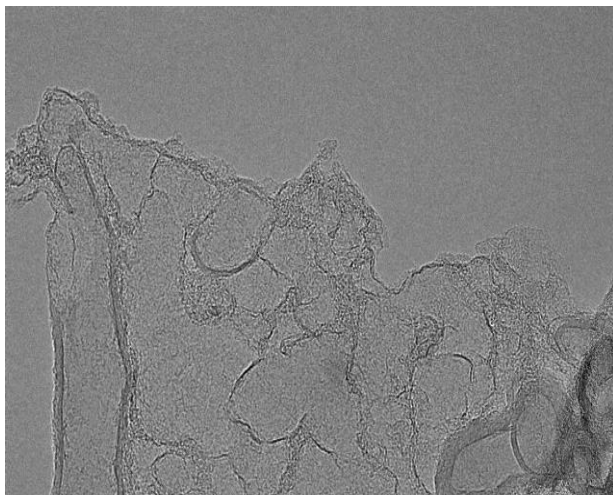
Pore diameter 2-3 μ m, with vertical graphene structure on pore walls.
Application: adsorption and purification, catalyst support, Li/Na/S support, electrochemical electrodes, supercapacitors, sound insulation and absorption, electromagnetic shielding, composite materials, etc.



Appearance of the graphene structured continuous block porous carbon



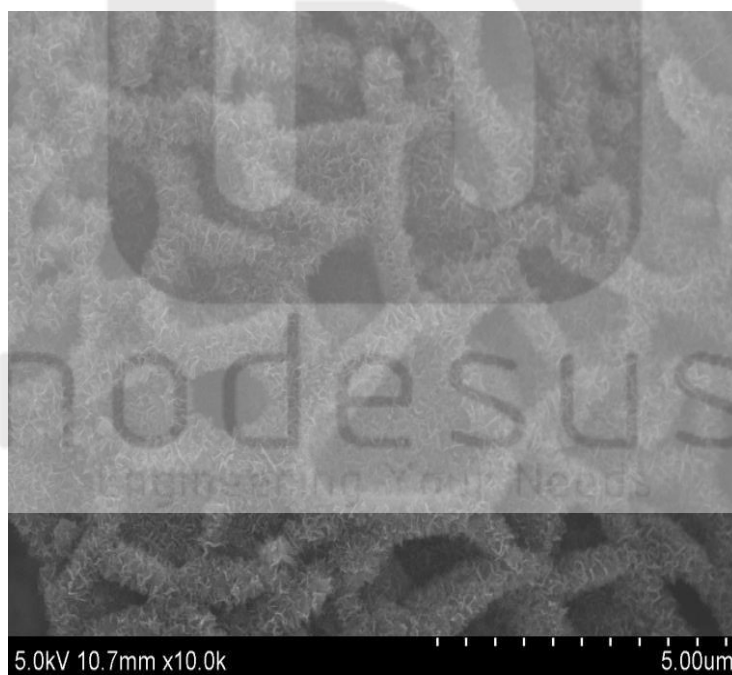
SEM image of the porous carbon



Vertical graphene composited porous carbon

Vertical graphene composited porous carbon (VG07)

With vertical graphene sheets on the pore wall surface of porous carbon.
Application: adsorption and purification, catalyst support, Li/Na/S support, electrochemical electrodes, supercapacitors, sound insulation and absorption, electromagnetic shielding, composite materials, etc.



SEM images of Vertical graphene composited porous carbon

