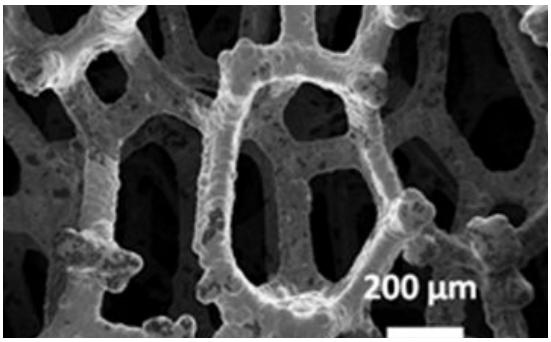
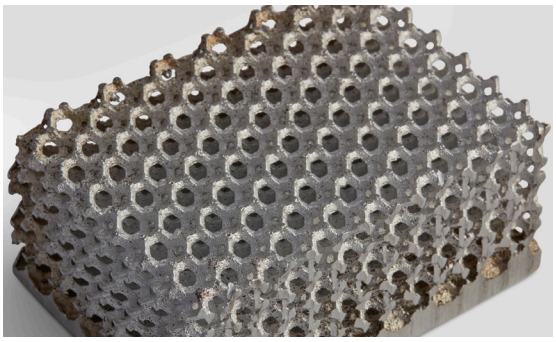
Sector focus
Metal Foams

GoodFellow
Your global supplier for materials

The design of graphene-based hybrid nanomaterials for photocatalytic applications is one of the most promising areas of research in the field of water remediation.

This is due to the combination of the excellent visible-light absorption abilities of organic photosensitisers such as polyporphyrins and the charge transfer properties of graphene-based materials. The low cost, eco-friendliness, flexibility and versatility of the molecular design create appealing features, both environmentally and economically.





Challenge

Critical to success was the promotion of direct and extensive contact between the graphene and the photosensitiser polymers.

Solution

Researchers from the University of Catania in Italy designed a freestanding apparatus for photocatalysis application. The apparatus was built of a 3D graphene hybrid material (graphene foam created by CVD of graphene on nickel foam) and the organic compound polyporphyrin. The foam structure of the graphene-on-nickel provided the extensive graphene surface area required for success.

Nickel foam provided by Goodfellow was used as a scaffold template for the creation, through chemical vapour deposition (CVD), of graphene foam. This is the latest example of metal foam being used for a growing list of innovative applications ranging from heat exchangers, energy absorbers, air-oil separators and acoustics, to filters, electrodes and more.

Reference: Ussia, Martina et al. “Freestanding photocatalytic materials based on 3D graphene and polyporphyrins” Scientific reports vol. 8,1 5001. 22 Mar. 2018.

GoodFellow
Your global supplier for materials

HEAD OFFICE
Goodfellow Cambridge Limited
Ermine Business Park
Huntingdon, PE29 6WR
England

Tel: 0800 731 4653 (UK)
or +44 1480 424 800

Fax: 0800 328 7689 (UK)
or +44 1480 424 900

info@goodfellow.com
www.goodfellow.com