

# G-CAM: The ideal material for prostheses

Pioneer in graphene nanotechnology in dentistry exhibits at IDS.

■ The research by Spanish company Graphenano Dental on the reinforcement of polymer matrices has made it a pioneer of the use of graphene nanotechnology in dentistry. At the 2021 International Dental Show in Cologne, Graphenano Dental exhibited its products, such as the G-CAM disc for CAD/CAM milling systems, which relies on this technology.

Graphene is a form of carbon in which the atoms are arranged in a single layer in a 2D honeycomb lattice nanostructure. Among its principal properties are its high traction resistance, lightness, biocompatibility and low coefficient of thermal expansion. Furthermore, it is ecological and recyclable.

“Unlike zirconia, for example, which is still widely used, our graphene nano-reinforced biopolymer G-CAM disc has excellent blending properties,” explained Graphenano Dental General Manager Jesús Martínez. He went on to say that “the appearance is extremely natural and resolves all the mechanical, physico-chemical and biological failures of the rest of the materials currently used in the industry”.

The incorporation of graphene into polymers is an innovative strategy to improve mechanical properties, increasing the elastic modulus as well as the tenacity, reducing the appearance of cracks and/or the spreading of them, as well as decreasing the shrinkage rate during polymerisation.

“Our material also benefits patients, of course, as it is really light and a lot softer than zirconia. A zirconia prosthesis that weighs 70g may only weigh as little as 12g when manufactured using the resin and graphene combination. With G-CAM, patients feel no difference

to their natural teeth,” Martínez added.

G-CAM has a CE mark, and Graphenano Dental has thus mainly focused on the European market, but is steadily branching out. The South and North American markets are its next target. The G-CAM disc has

been submitted to the U.S. Food and Drug Administration for market clearance, and it will be available throughout the US in two to three months. To find out more about Graphenano Dental and the G-CAM disc, visit [www.graphenanodental.com](http://www.graphenanodental.com). ◀

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◀ Jesús Martínez, general manager of Graphenano Dental, met with Dental Tribune International at the 2021 International Dental Show to discuss the company's revolutionary products.


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◀ With the aim of producing sustainable and biocompatible materials that reduce manufacturing costs and workload, Graphenano Dental launched its first commercialised product, G-CAM, with improved mechanical, chemical and biological properties.



◀ G-CAM bears a CE mark and is now available in more than 40 countries.

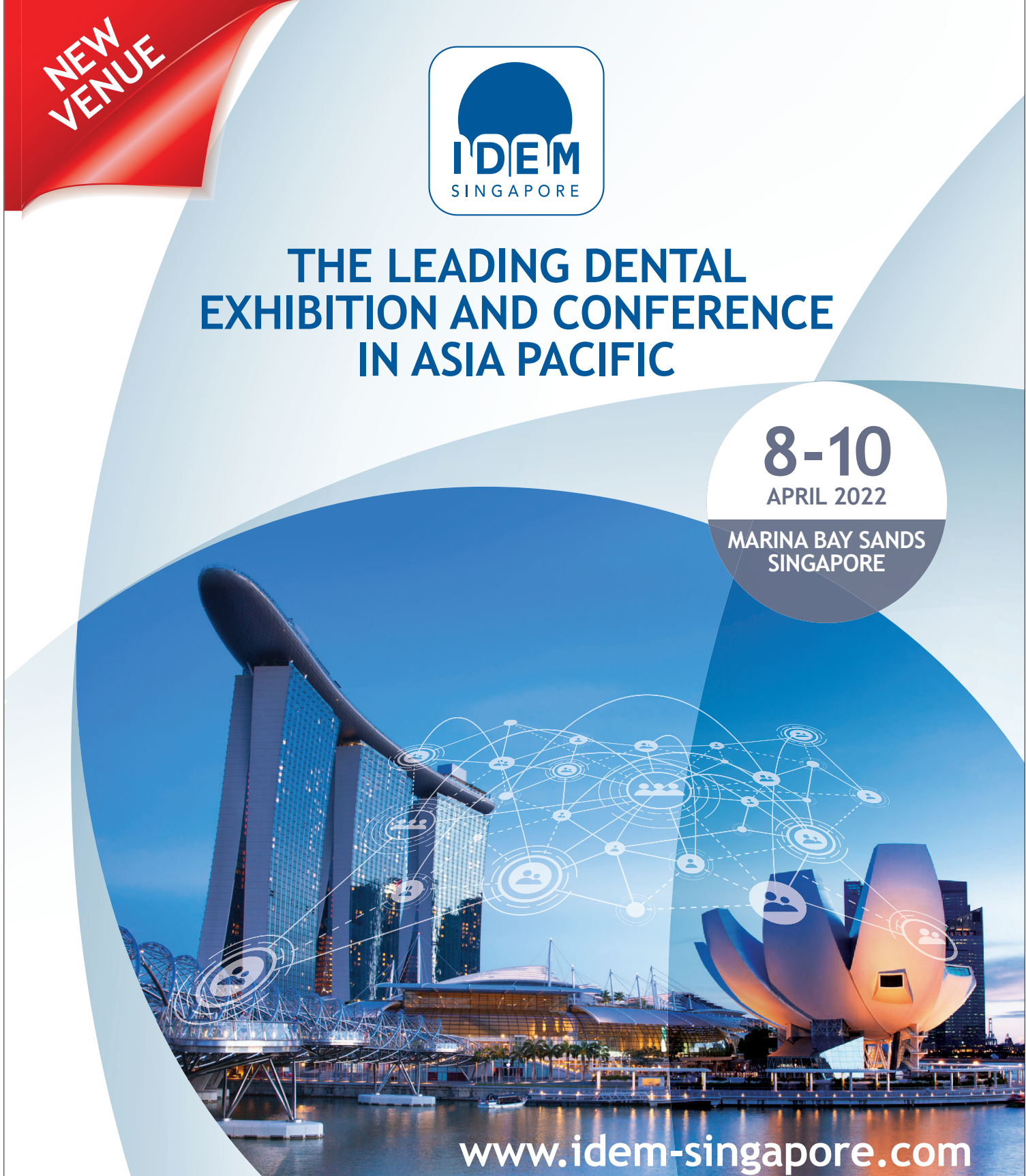


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