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Cutting Edge Technology Gets Even Sharper

Researchers from Germany Develop Innovative Razor Blade

NEW YORK, NY – June 28, 2010 – Disposable razor blades could become a thing of the past if scientists at GFD have their way. The German high-tech company has developed a super-sharp razor blade made of industrial diamonds that could last more than 1,000 times longer than today's conventional blade. Because GFD only produces the razor blade but not the finished razor, the company is currently exploring possible strategic alliances to develop this product for the consumer market.

The technological breakthrough achieved by GFD employs two specialized processes: the nanocrystalline diamond coating of a carbide blade followed by the plasma sharpening of the blade. To manufacture such a razor blade, a nanocrystalline diamond coating is first applied to a carbide blade, then the minute, jewelled layers are polished by an innovative plasma sharpening process developed by the GFD researchers. The blade is polished until the cutting edge is sharpened to only a few nanometers, therefore consisting of merely a few atoms. This process manages, for the first time, to combine the hardest material in the world with the sharpest possible cutting edge.

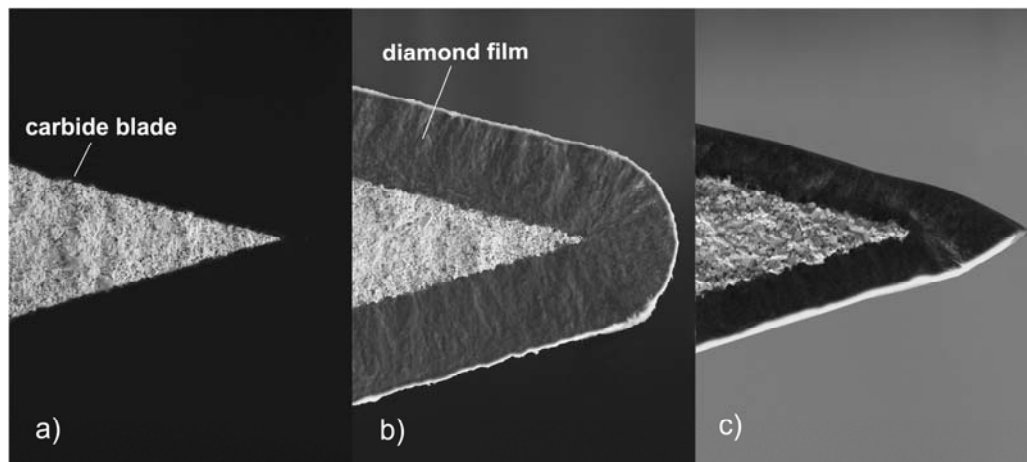
“This simple-sounding procedure is the result of years of research and development,” explains André Flöter, doctor of physics and the managing director of Ulm-based GFD, short for Gesellschaft für Diamantprodukte mbH.

In spite of the diamond's extreme hardness, diamonds have in the past played a subordinate role as a manufacturing material. Reasons for this include the rarity of diamonds' natural occurrence in the world and, until recently, the high cost of manufacturing diamonds artificially. It was not until the early 1980s that researchers began using a new procedure to manufacture diamonds artificially as a thin layer and at a reasonable price. GFD is one of the first companies in the world to master the industrial plasma sharpening of diamond coatings on a scale relevant to production.

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In cooperation with Professor Hans-Jörg Fecht, a renowned expert on nanomaterials from the University of Ulm, and with the aid of public research funding, GFD has for many years been developing products in the area of cutting technology based on artificially manufactured nanocrystalline diamond coatings, which can be used in industrial manufacturing. Industrial diamond razor blades demonstrate a product life of up to 1,000 times longer than steel blades. The hardest material known to man ensures that the blade remains ultrasharp.

Flöter and his colleagues now plan to industrialize this new technology with the addition of business partners who specialize in wet shaving. “Potential partners should be well versed in marketing in the middle to upper price segment,” Flöter says. “Initial talks are underway. Thankfully one does not have to be a millionaire to be able to enjoy the new razor. If one adds together the costs of disposable razors over the period of one year, then our diamond blade could certainly be a reasonably priced alternative.”



Illustrations of (a) the carbide blade; (b) the nanocrystalline diamond coating; and (c) the finished product once it has been sharpened using the patented plasma process. Photo courtesy of GFD.

Flöter and his colleagues at GFD agree that their blade will certainly provide a sharper and longer-lasting alternative for the future and is no doubt, a cut above the rest!

About GFD:

GFD develops and produces diamond-based products and belongs to the leading suppliers of diamond blades worldwide. GFD products, which include microparts as well as blades, are currently used primarily in plastic manufacturing and processing and pharmacy.

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Web site: www.diamaze.com

To schedule an interview with GFD's André Flöter or an on-site visit in Ulm, and for more information about GFD, contact Mantra Public Relations at +1-212-645-1600.

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