



## VOLKMAR STENZEL REWARDED WITH COSI PRIZE 2010 FOR “SHARKSKIN” RIBLET COATINGS

In July 2010 Dr. Volkmar Stenzel was awarded the CoSi Prize 2010 by Prof. Dr. Gijsbertus de With at the 6<sup>th</sup> Coating Science International Conference in Noordwijk, the Netherlands, for his presentation entitled “Low-drag coatings for reducing the fuel consumption of aircraft and ships”. 140 delegates from 27 countries, representing R&D and industry, attended the conference.

The presentation by Dr. Volkmar Stenzel on “sharkskin” riblet coating systems developed at the Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM was chosen from 160 contributions as the most interesting innovative development at the 6<sup>th</sup> Coating Science International Conference.

fuel consumption in aircraft and ship fleets by around two percent – a remarkable potential for sustainably reducing fuel consumption, CO<sub>2</sub> emissions and therefore costs – not to mention protecting resources and the environment (see pages 70 and 90).

---

### The riblet coating system of the Fraunhofer IFAM

---

The riblet coating system is based on the scales of fast-swimming sharks which have microscopic grooves, so-called riblets, in the longitudinal direction. It is an UV curing system containing nanoparticles, and is applied with a roller application unit which covers, structures, and cures the coating. This method can be readily used for 3-dimensional, curved surfaces.

With its microstructured surface, the riblet coating system is able to significantly reduce the drag of surfaces to air and water. This is of special interest for large structures such as aircraft and ships. The coating can withstand severe conditions such as extreme temperature fluctuations from –55 to +70 degrees Celsius, aggressive ultraviolet radiation, and very high speeds. If the system is used comprehensively, it is possible to reduce

## CONTACT

### Institute

*Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM,  
Department of Adhesive Bonding Technology and Surfaces, Bremen*

- 2** *Dr. Volkmar Stenzel, Head of the Paint/Lacquer Technology section at the Fraunhofer IFAM, receiving the CoSi Prize 2010 from Prof. Dr. Gijsbertus de With, professor at Technical University of Eindhoven, and co-organizer of the 6<sup>th</sup> Coating Science International Conference.*