New Oxford spin-out to transform surfaces

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The white silica modified with the Oxford colour coatings. Credit: Mark Maloney

The latest spin-out company from the University of Oxford, Oxford Advanced Surfaces Ltd, plans to apply surface science to develop a revolutionary coating for materials like plastics and Teflon.

Oxford Advanced Surfaces, the 62nd company to spin out from Oxford, will exploit coatings technology developed by the founders Dr. Mark Moloney and Dr. Jon-Paul Griffiths in the Chemistry Department.

Drs Moloney and Griffiths have developed coatings that exploit a reactive type of molecule, controlling the reactivity so it can be conveniently and safely applied while using it to modify normally inert surfaces such as plastics and even Teflon and diamond. The coatings are applied in a simple two-step process that is designed to fit into routine manufacturing – first the coating is rolled, dipped, painted or sprayed

onto the surface and then it is cured by heat or UV. This gives a permanently attached coating that cannot be rubbed or washed off.

Oxford Advanced Surfaces' coatings are only a few molecules thick yet they produce dramatic changes in the surface properties of the material. The platform technology is versatile and can be used to give new properties to a broad range of materials. One application area where the technology is generating keen interest is adhesion. The coatings can help stick metals to plastic films in production of printed circuit boards for mobile phones. They also produce a strong bond between layers of different plastics, something that is important but difficult to achieve for manufacturers of high quality display screens and packaging. The coatings can give antibacterial properties, which has applications for water and air filters and to keep surfaces, fabrics and equipment in hospitals free from infection.

Isis Innovation, the University's wholly-owned technology transfer arm, holds granted patents and patent applications on the intellectual property rights to the technology and has licensed them to the Company.

The company has an experienced management team. Marcelo Bravo, the Chief Executive of Oxford Advanced Surfaces, is a successful entrepreneur with a background in chemistry and chemical engineering and international experience in major consumer products companies. He will join the company full-time and said 'The beauty of our technology is not only its effectiveness and versatility but also its simplicity of implementation. We are looking forward to working with customers in a range of industries to deliver innovative solutions to their problems or new competitively advantaged opportunities'.

For more information, go to www.isis-innovation.com/

Source: University of Oxford