

Novel functional additives for advanced coatings and resins

A new family of functionalised silica additives has been developed that generates new opportunities for the creation of novel advanced functional coatings and resins. Simple chemical processing methods can be used to controllably manufacture silica particles from ~20nm to over 500nm. The surface of the particles can be used to grow self-assembled monolayers to determine the functional properties. This novel non-hydrolytic method allows several functional groups to be attached to the same particle enabling multi-functional behaviour. Incorporation of these functionalised silicas into next generation coatings for durable, highly repellent surfaces is underway for applications in the renewable power generation and aerospace sectors and will be described. Initial commercialisation of these additives has also begun via a new materials-by-design e-commerce route.



Prof. Alan Taylor
Technology Fellow
TWI
Granta Park
Great Abington
CB21 6AL
United Kingdom

Tel: +44 (0)1223 899000
Tel (direct) : +44 (0)1223 899387
Fax: +44 (0)1223 892588
Mobile: +44 (0)758 450 4653
Skype: [Alan.taylor.twi.co.uk](https://www.skype.com/user/Alan.taylor.twi.co.uk)
Website: www.twi.co.uk