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Self-healing epoxy coatings and composites for potential applications

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Self-healing materials attract enormous scientific attention as they offer wide range of applications in conjunction with long-lasting performance. Self-healable polymers find potential candidates for construction materials, automotive parts, electrical encapsulation, adhesives, coatings, etc. Due to the light weight, high thermo-mechanical performance, excellent adhesion, gloss, good chemical resistance, and corrosion resistance, epoxy resins are preferred over other polymers for coating applications. Although epoxy resin coatings are widely used in commercial vehicles and high compact aircraft, their susceptibility toward scratches and microcracks is a major concern. Such failures may be addressed by making use of self-healing epoxy coatings.

Biography

Harikrishnan Pulikkal Parambil is currently pursuing Ph.D. degree in Materials Science and Production Engineering from The Sirindhorn International Thai-German graduate institute of Technology, King Mongkut's University of Technology North Bangkok, Thailand. He has published few papers in high quality international journals. His current research interest is the preparation and characterization of smart polymeric materials and Automotive Lightweight Composites.

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