

Self-healing Electronic Skins for Aquatic Environments**Speaker:** Li Si

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Date: 5th September 2019, Thursday
Time: 3:00 to 3:30 pm
Venue: EA-06-03

Abstract

Artificial skins that possess multi-functionality, for example transparent, stretchable, touch-sensitive, self-healing, and ability to submerge in aquatic environments, could be used to develop applications such as aquatic soft robots and water-resistant human-machine interfaces. In this talk, we introduce a skin-like material that is transparent, electrically conductive and can autonomously self-heal in both dry and wet conditions. Owing to ion-dipole interactions, it offers fast and repeatable electro-mechanical self-healing in wet, acidic and alkali environments. And next, we illustrate the potential applications of the approach by using our electronic skins to create touch, pressure and strain sensors. Finally, we show that the material can be printed into soft and pliable ionic circuit boards.

Li Si is currently a Ph.D. candidate at Department of Material Science and Engineering in National University of Singapore. He received his master's degree at School of Electrical and Electronic Engineering in Nanyang Technological University. His current research interests are in the development of flexible magnetic pressure sensing devices.

ALL ARE WELCOME!

Host: Xue Junmin