

Mirsajjad Mousavi

Ph.D. Researcher



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Research interests:
Corrosion of electronic devices
Localised corrosion
Scanning electrochemical techniques

In-situ study of corrosion phenomena on electronic devices by local electrochemical techniques

Research activities

Corrosion study of electronic devices nowadays, due to living in an era of highly sophisticated electronic and communication technology, micro- and nano-electronic devices have extended to all aspects of our daily life. Corrosion deterioration in the micro/nano scale of designed materials for electronic devices (e.g., Integrated Circuit (IC), Printed Circuit Board (PCB), and electronic components), in which a number of metallic components exist in different forms, leads to decrease in the electrical performance, efficiency and lifetime. My project focus on the study of the main causes for localised corrosion phenomena in electronic devices which leads to early failure of the devices and consequent economic impact.

Investigating the fundamental and technical points of Scanning Kelvin Probe Force Microscopy (SKPFM) and Scanning Kelvin Probe (SKP) For corrosion reliability of electronic devices, high-resolution electrochemical Volta potential mapping is required to anticipate the susceptible area for the localised corrosion. In this step, I have studied the fundamental of the techniques, limits and boundaries of the them, and comprehensive comparison of both methods.

Teaching activities

Instructor of the lab sessions on Electrochemical methods within the course *Characterization of Materials (MS43010)*.

Other activities:

- Attending to 2nd mCBEEs training school, Jonkoping, Sweden, 6-9th of November 2018.
(www.mcbees.eu)