

Characterization of the Electrical Double Layer using Scanning Electrochemical Potential Microscopy-SECPM
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New techniques offering nanometer scale electrochemical information have been emerging. Among them are scanning electrochemical microscope and scanning electrochemical potential microscope, the former makes possible electrochemical reactivity study on nanometer scale via current detecting; while the latter offers direct information of the electrical double layer using a potentiometric probe. Potential profiles across the electrical double layer of different materials such as HOPG, Au, Sn₆₀Pb₄₀ alloy in different solutions have been achieved using SECPM. Atomic resolution SECPM imaging has also been demonstrated.