

CMC Biomaterials Initiative

Borisy Laboratory

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Micropatterned Substrates for Imaging Living Cells

The Borisy laboratory has developed novel micropatterning approaches that overcome many of the limitations associated with micropatterned substrates based on inert gold layers. Using an anisotropic solid microetching (ASOMIC) procedure, molecular dynamics imaging by wide-field and total internal reflection fluorescence (TIRF) microscopy of living mammalian cells and correlative platinum replica electron microscopy can be achieved. The protocols describing the production of these micropatterned substrates are described in detail in their October 2005 publication in Nature Methods. (Kandere-Grzybowska K, Campbell C, Komarova Y, Grzybowski BA, Borisy GG. Molecular dynamics imaging in micropatterned living cells. Nat Methods. 2005 Oct;2(10):739-41. [PubMed](#))