

Investigating Dynamic Processes using High-Spatiotemporal Resolution AFM with Simultaneous Optical Microscopy

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The ability of atomic force microscopy (AFM) to obtain topography images with sub-nanometer resolution remains unmatched by other imaging techniques. However, the addition of a modules to study diverse processes is still desired, including faster scanning and larger sample areas. We will present how the latest advances in AFM technology and their integration with optical microscopy are being applied to study a wide-range of samples at faster speed. We will also present our fastest AFM ever, the NanoRacer (scanning speed up to 50 frames/second), which can be used to study real time dynamics associated with soft materials and nano-materials at the molecular level, and can have functional implications.

Short Bio:

Dr. Dutta has studied Biophysics and obtained his PhD from the Wake Forest University NC, USA for his research on drug-protein/drug-DNA interactions at the single molecule level using AFM. Samrat joined Bruker in 2018 as an Applications Scientist and his main focus lies on Applications of AFM for life-science based research.