VIDEO ARTICLE

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Atomic Force Microscope-Based Investigation of 0D and 2D Nanomaterials

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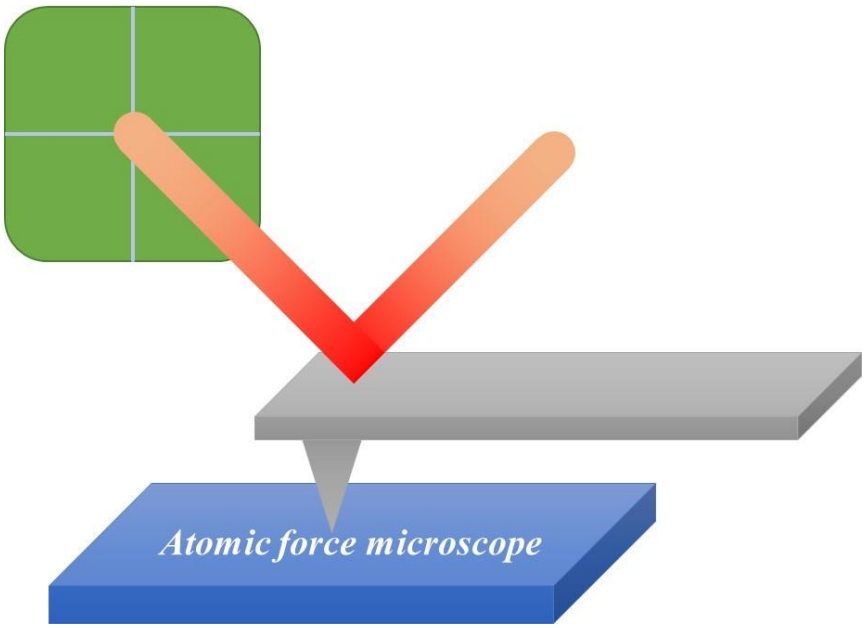
Graphical Abstract



Abstract

Atomic force microscopy (AFM) [1]. is one of the important tools for investigation of 0 dimensional (0D) and 2 dimensional (2D) nanomaterials revealing their intrinsic properties such as mechanical, electrical, optical properties. In this lecture, I introduce the operation principle of the atomic force microscope and their practical applications with several novel techniques (Kelvin probe force microscope, Lateral force microscope, Young's modulus [2], advanced AFM with quartz tuning fork [3], etc) for 0D (nanoscale water meniscus [4],) and 2D (graphene, Transition metal dichalcogenides) nanomaterials.

Keywords: Atomic force microscope, nanoscale water meniscus, graphene, Transition metal dichalcogenide monolayers.

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Biography of Presenting Author

Assistant Professor **Sangmin An** is based in the Department of Physics of Jeonbuk National University, South Korea. He received his PhD in Physics (AFMbased study on nanomaterials) from Seoul National University, South Korea. Following research into NIST in the USA (3 years) and SNU (3 years) as a researcher, An is continuously focusing on 0D & 2 D nanomaterials via the advanced AFM (STM, SEM and optics).

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