



***Nano Scale Space Charge:  
KPFM and C-AFM for  
Dark/Light Injection  
and Dynamic Phenomena***

**Rohit Kumar**

*Faculty member, Department of Chemical Engineering,  
M.J.P. Rohilakhand University, Bareilly, India*

E-mail-rohit.k@mnnit.edu.in

## **Abstract:**

The miniaturization of scientific and engineering endeavors is only one way in which the fast-developing discipline of nanotechnology intends to transform the landscapes of science, innovation, and civilization. Nanoscience and nanotechnologies have shown astounding promise, with potential applications spanning from consumer electronics and cosmetics research to drug development and implementation in the health care industry, innovative treatments and therapeutic applications, power generation and storage, environmental engineering and recovery, industrial equipment, and textile manufacturing. Some of this technology's biggest fans even see a brighter future for it. Other others, however, argue that the hype surrounding prospective nanotechnology goes far beyond the technology's realistic potential and belongs more to science fiction novels and films. Given nanotechnology's enormous potential, this research explored the field's current state and evaluates whether or not the technology poses any significant risks. Moreover, the policy concerns that are presented by the need to regulate nanotechnology for the public benefit are examined, as are the ethical concerns and significance of these technologies.

## **Keywords:**

Amplitude Modulation (AM), Kelvin Probe Force Microscopy (KPFM), Miniaturization, Nano Technology.