
Leveraging Machine Learning for Advancements in Materials Science using Python

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Abstract:

This study delves into applying machine learning techniques to determine and analyze the properties of nanostructured Copper Oxide (CuO) in the field of materials science. By utilizing Python, a versatile and potent programming language, we employ diverse machine learning approaches to investigate the intricate characteristics and behaviors of CuO at the nanoscale, including image preprocessing, segmentation, particle size measurement, statistical analysis, and visualization. Leveraging advanced machine learning models, we achieve a comprehensive understanding of the distinctive properties and potential applications of nano CuO, thus contributing significantly to the advancement of materials science

Keywords

Python, Nanostructured, image preprocessing, particle size, Machine Learning.