

Deep Data in Scanning Probe Microscopy: "G-mode," Getting All The Data During SPM Imaging

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Technology Summary

The invention relates to Scanning Probe Microscopy and more specifically to information-theory analysis of the cantilever output stream. We introduce a novel concept for SPM data acquisition based on acquisition and multivariate analysis and compression of the entire response of the cantilever in time. The use of multivariate statistical methods such as PCA, allows to guide a data sampling strategy and attain insight into how the data is structured in space, frequency, and information domains.

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