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A material scientist's guide to fractal analysis

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Abstract: Abstract: In this poster, we introduce the reader to fractal analysis, underlining its strong connection to the shapes of different materials. We demonstrate what led to the development of fractal analysis, introduce some ways that relevant quantities can be measured, and expand on the measurement methods that we have developed. We then illustrate the particular characteristics of our algorithms that make them especially attractive for classifying wildly diverse imaging methods, such as MRI images, AFM images, and optical microscope images. We end by mentioning some highly promising preliminary results we have extracted with regards to Alzheimer's disease, cancer and material classification.