



Division of the History of Chemistry
American Chemical Society

Citation for Chemical Breakthrough



The Invention of Magnetic Resonance Imaging

Lauterbur, P. C. *Nature* 1973, 242, 190-191.

Image Formation by Induced Local Interactions: Examples Employing Nuclear Magnetic Resonance

AN image of an object may be defined as a graphical representation of the spatial distribution of one or more of its properties. Image formation usually requires that the object interact with a matter or radiation field characterized by a wavelength comparable to or smaller than the smallest features to be distinguished, so that the region of interaction may be restricted and a resolved image generated.

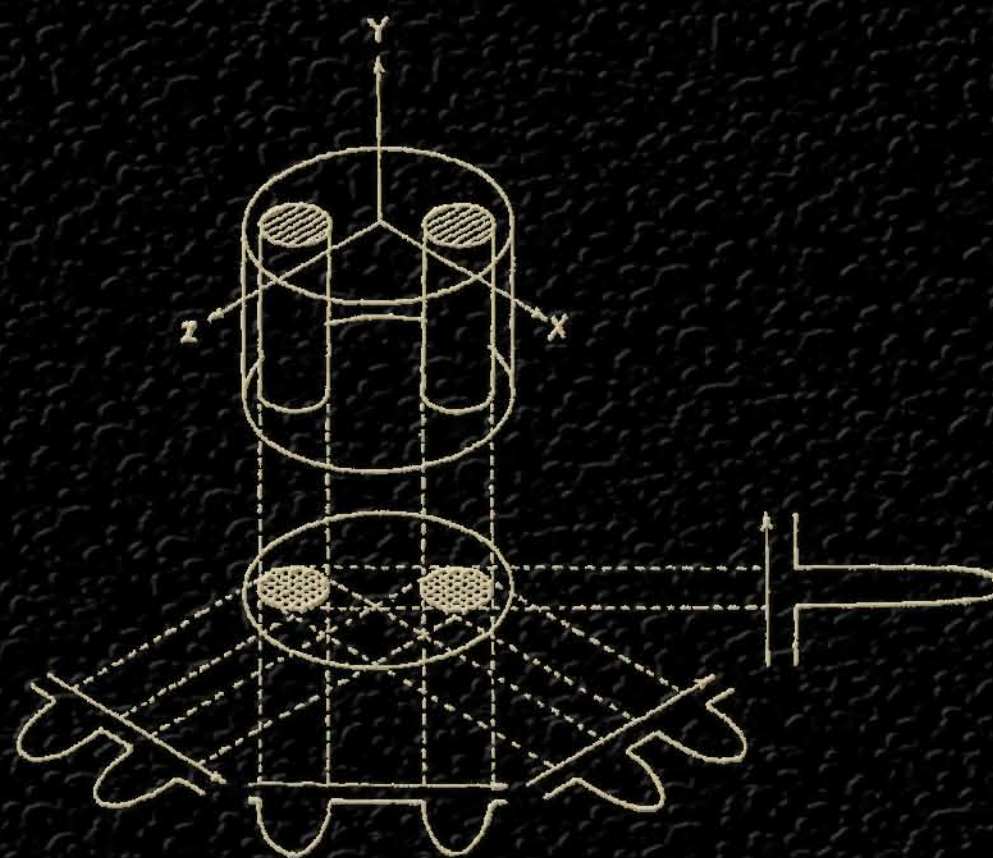


Fig. 1 Relationship between a three-dimensional object, its two-dimensional projection along the Y-axis, and four one-dimensional projections at 45° intervals in the XZ-plane. The arrows indicate the gradient directions.

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Presented to the Department of Chemistry
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2008