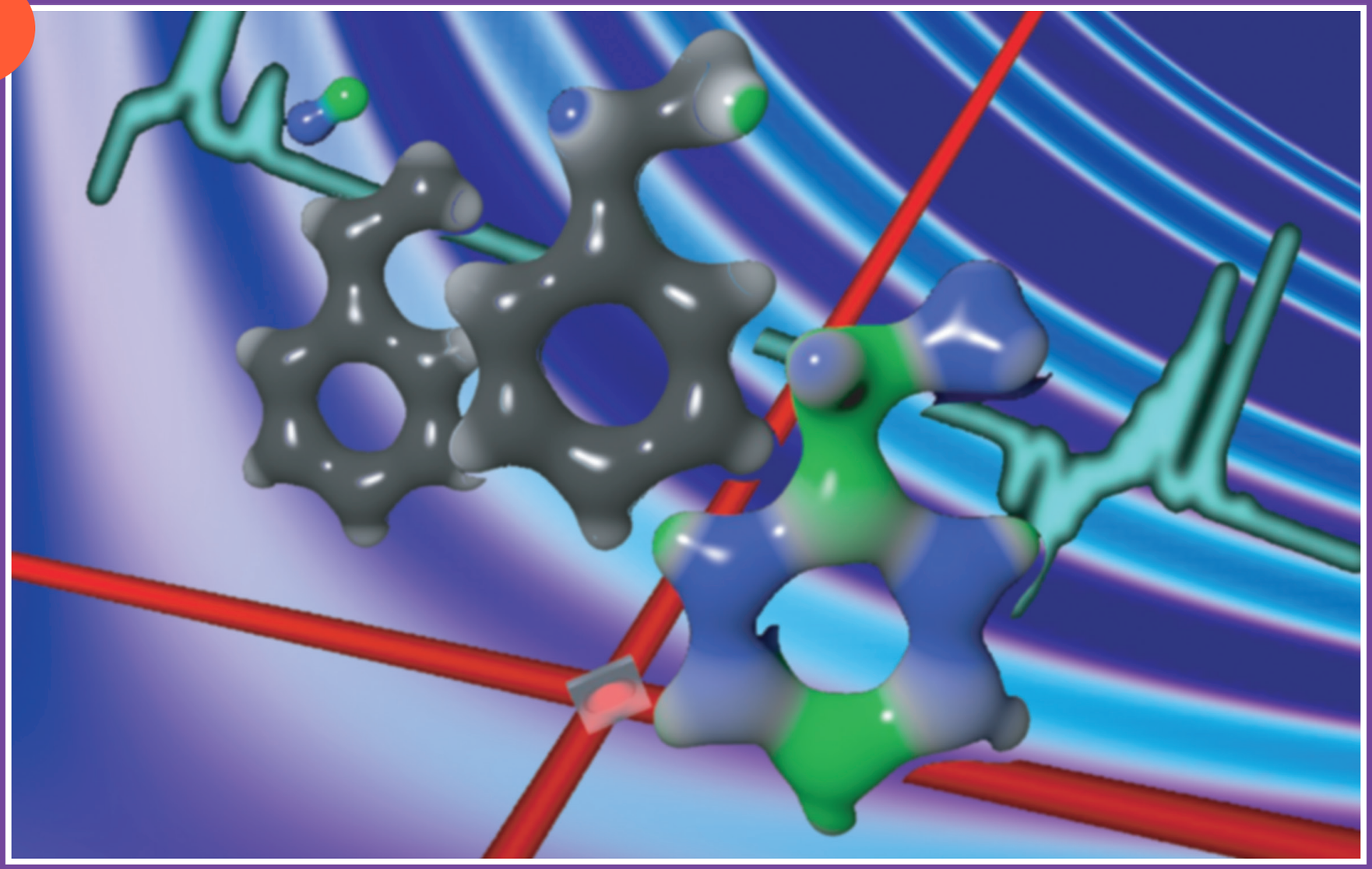
NMR is ART



NMR without the magnet

Thomas Theis, 2010

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Field strength: Zero field

Why is this your favorite spectrum?

Zero-Field NMR: The Earth's field is shielded by a factor of 1 million. The proton frequency is less than 1 mHz. Nonetheless, information-rich, high-resolution spectra are acquired. All the information is encoded via J-couplings. The polarization is induced by adding parahydrogen to the double bond of styrene. The detection is performed with IR-lasers that intersect at right angles in a rubidium vapor cell. The rubidium vapor is highly sensitive to magnetization coming from the NMR sample. Accuracy of below 1 mHz can be achieved.