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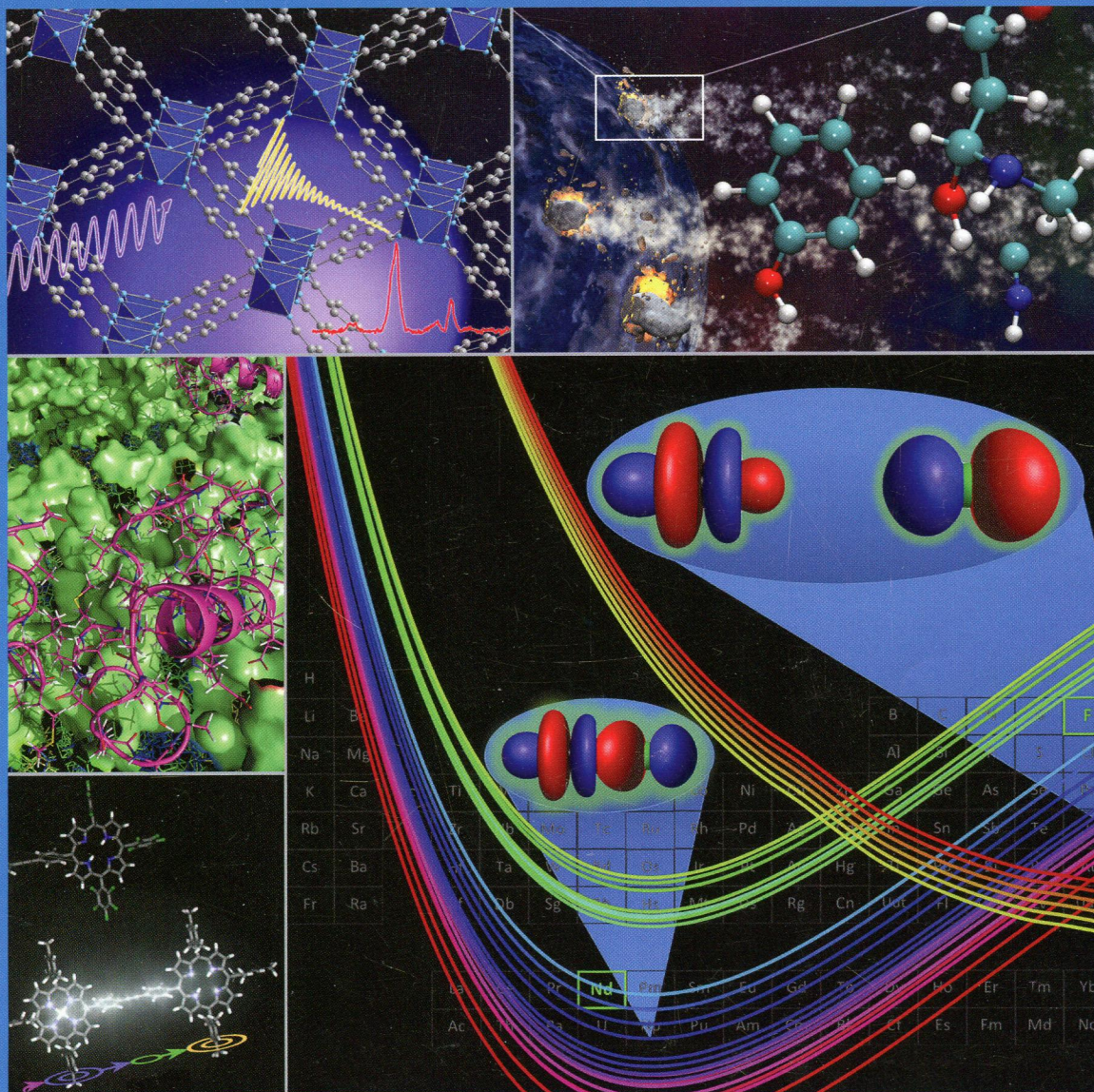
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# THE JOURNAL OF PHYSICAL CHEMISTRY

# A



ISOLATED MOLECULES, CLUSTERS, RADICALS, AND IONS; ENVIRONMENTAL CHEMISTRY,  
GEOCHEMISTRY, AND ASTROCHEMISTRY; THEORY



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**ON THE COVER:** Collage of cover art from recent issues of *J. Phys. Chem.* Top Left:  $^{17}\text{O}$  Solid-State NMR Spectra Provide Signatures of Various Oxygen Species in Metal-Organic Frameworks (*J. Phys. Chem. C* **2013**, *117* (33), 16953–16960). Center-Left: Behavior of Amyloid  $\beta$ -Peptides on a Ganglioside-Containing Membrane Surface (*J. Phys. Chem. B* **2013**, *117* (27), 8085–8094). Bottom Left: Bridge-Mediated EET in Porphyrin Dimers: Electronic Coupling Reduced by Fluorination (*J. Phys. Chem. C* **2013**, *117* (24), 12423–12431). Top Right: Synthesis of Prebiotic Hydrocarbons in Impacts of Simple Icy Mixtures on Early Earth (*J. Phys. Chem. A* **2013**, *117* (24), 5124–5131). Bottom Right: Computed Potential Energy Curves for Quartet, Doublet, and Sextet States of  $\text{NdF}^{2+}$  (*J. Phys. Chem. A* **2013**, *117* (42), 10881–10888).

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[dx.doi.org/10.1021/jp4109865](http://dx.doi.org/10.1021/jp4109865)

Graph Theoretical Solutions for the Coupled Kinetic Rate Equations

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[dx.doi.org/10.1021/jp411297s](http://dx.doi.org/10.1021/jp411297s)

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[dx.doi.org/10.1021/jp411445h](http://dx.doi.org/10.1021/jp411445h)

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[dx.doi.org/10.1021/jp409178j](http://dx.doi.org/10.1021/jp409178j)

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[dx.doi.org/10.1021/jp410511c](http://dx.doi.org/10.1021/jp410511c)

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[dx.doi.org/10.1021/jp410781y](https://doi.org/10.1021/jp410781y)**Probing Raman Enhancement in a Dopamine–Ti<sub>2</sub>O<sub>4</sub> Hybrid Using Stretched Molecular Geometries**

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[dx.doi.org/10.1021/jp411378j](https://doi.org/10.1021/jp411378j)**Experimental Characterization of the Hydride <sup>1</sup>H Shielding Tensors for HfX<sub>2</sub>(PR<sub>3</sub>)<sub>2</sub> and HRhCl<sub>2</sub>(PR<sub>3</sub>)<sub>2</sub>: Extremely Shielded Hydride Protons with Unusually Large Magnetic Shielding Anisotropies**

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[dx.doi.org/10.1021/jp404026s](https://doi.org/10.1021/jp404026s)**Thermal Processing of Formamide Ices on Silicate Grain Analogue**

M. Michele Dawley, Claire Pirim, and Thomas M. Orlando\*

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[dx.doi.org/10.1021/jp4042815](https://doi.org/10.1021/jp4042815)**Radiation Processing of Formamide and Formamide:Water Ices on Silicate Grain Analogue**

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