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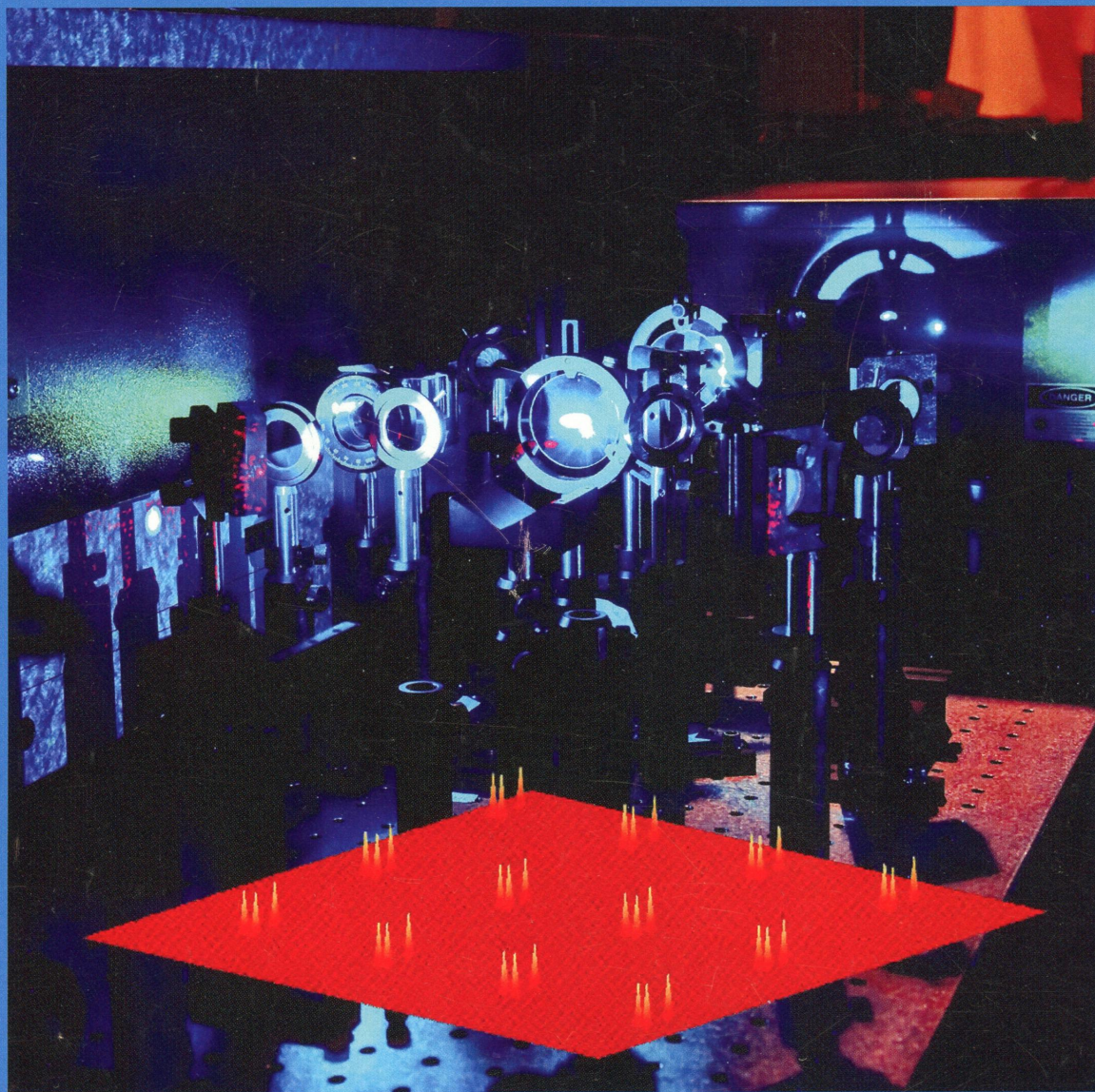
VOLUME 118

NUMBER 34

pubs.acs.org/JPCA

THE JOURNAL OF PHYSICAL CHEMISTRY

A



Vibrational and
Rotational Peak
Patterns Created Using
High-Resolution
Coherent
Three-Dimensional
Spectroscopy
(see page 5A)

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



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ON THE COVER: This picture shows part of a high-resolution coherent multidimensional spectrometer and a three-dimensional spectroscopy peak pattern created by using it. Coherent multidimensional spectroscopy can be used to overcome severe congestion problems that commonly plague electronic spectra; peaks in the two-dimensional (2D) spectra are sorted by quantum number, species, selection rules, etc., and vibrational and rotational information can be directly extracted from easily recognizable and distinct rotational and vibrational patterns. When severe congestion is a problem for the 2D technique, expansion to the third dimension can be used to achieve selectivity, resulting in useful patterns that are different from those produced in 2D spectroscopy. See page 6846.

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[dx.doi.org/10.1021/jp504902v](https://doi.org/10.1021/jp504902v)

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[dx.doi.org/10.1021/jp504933a](https://doi.org/10.1021/jp504933a)

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Effective Ion Mobility Calculations for Macromolecules by Scattering on Electron Clouds

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[dx.doi.org/10.1021/jp505422e](https://doi.org/10.1021/jp505422e)

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