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DECEMBER 4, 2014

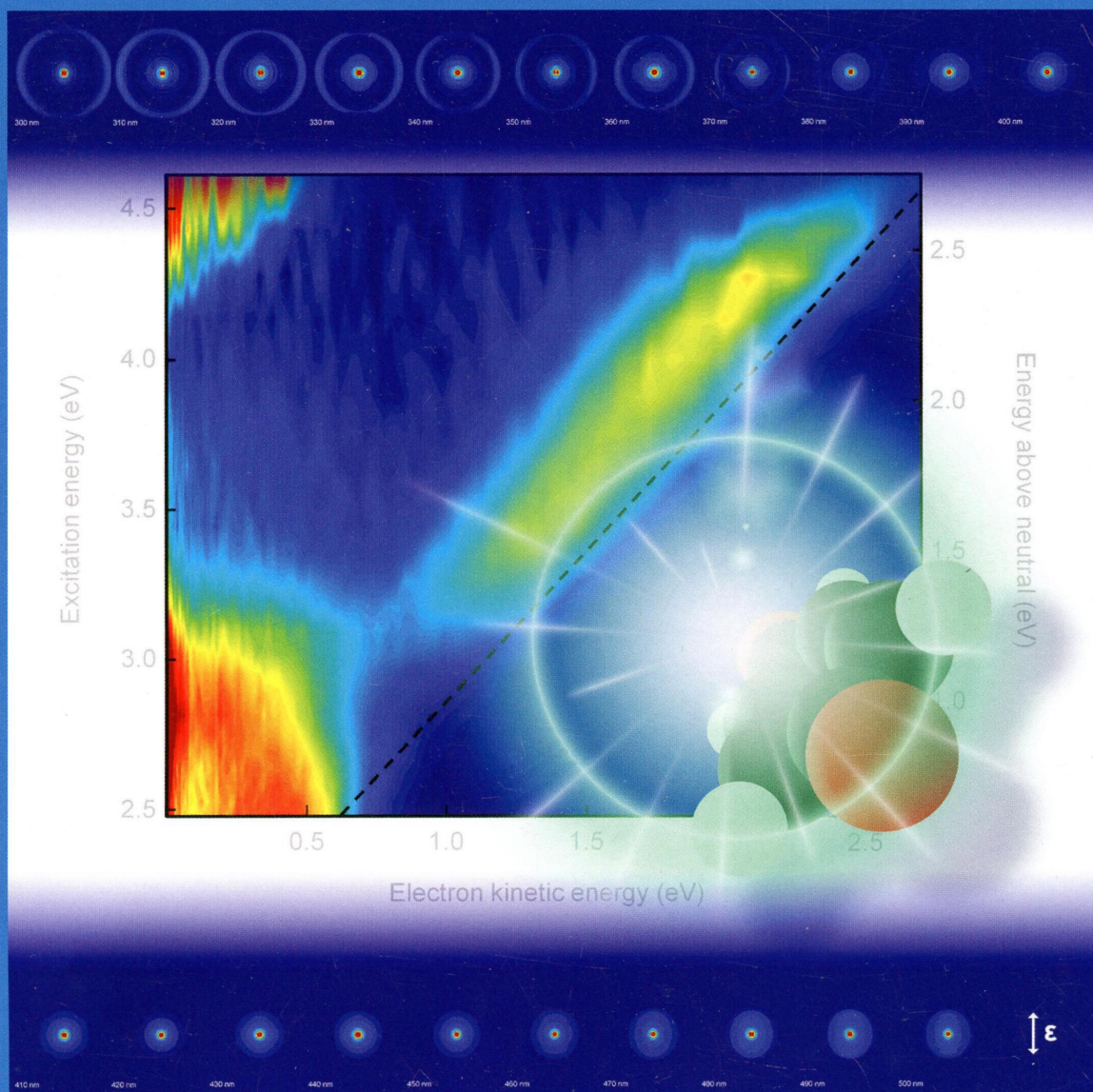
VOLUME 118

NUMBER 48

pubs.acs.org/JPCA

# THE JOURNAL OF PHYSICAL CHEMISTRY

# A



Anionic Resonances of *Para*-Benzoquinone Have Been Probed by Frequency- and Angle-Resolved Photoelectron Spectroscopy (see page 11346)

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



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**ON THE COVER:** Photoelectron imaging at photon energies spanning a range of the continuum allows resonances of the radical anion of *para*-benzoquinone to be probed. The frequency-resolved photoelectron spectra show clear evidence for above threshold dynamics leading to the formation of the ground electronic state. Changes in the anisotropy of the emitted electrons provide insight into changes in electronic character of excited states. The methodology is broadly applicable to the study of anionic resonances of large molecules. See page 11346.

## Articles

### Kinetics and Dynamics

11337 

DOI: 10.1021/jp510498j

**New Insights into Thermal Decomposition of Polycyclic Aromatic Hydrocarbon Oxyradicals**

Peng Liu, He Lin,\* Yang Yang, Can Shao, Chen Gu, and Zhen Huang

### Spectroscopy, Photochemistry, and Excited States

11346 

DOI: 10.1021/jp509102p

**Anion Resonances of *para*-Benzoquinone Probed by Frequency-Resolved Photoelectron Imaging**


Christopher W. West, James N. Bull, Erkki Antonkov, and Jan R. R. Verlet\*

11355

DOI: 10.1021/jp509199m

**Radical–Triplet Pair Mechanism of Electron Spin Polarization. Detailed Theoretical Treatment**


A. I. Shushin\*

11364 

DOI: 10.1021/jp509382m

**Quantum Control Spectroscopy of Competing Reaction Pathways in a Molecular Switch**

Cristina Consani, Stefan Ruetzel, Patrick Nuernberger, and Tobias Brixner\*

11373 

DOI: 10.1021/jp509823v

**Pinolinic and Isonicotinic Acids: A Fourier Transform Microwave Spectroscopy Study**

Isabel Peña, Marcelino Varela, Vanina G. Franco, Juan C. López, Carlos Cabezas, and José L. Alonso\*

11380 

DOI: 10.1021/jp507965m

The Interaction of Propionic and Butyric Acids with Ice and  $\text{HNO}_3$ -Doped Ice Surfaces at 195–212 K

Manolis N. Romanias, Vassileios C. Papadimitriou, and Panos Papagiannakopoulos\*

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## Molecular Structure, Quantum Chemistry, and General Theory

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11388 

DOI: 10.1021/jp5076862

Cation–Alkane Interaction

J. Richard Premkumar and G. Narahari Sastry\*

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11399 

DOI: 10.1021/jp508877m

Selectivity in ROS-Induced Peptide Backbone Bond Cleavage

Hannah M. Stringfellow, Michael R. Jones, Mandy C. Green, Angela K. Wilson,\* and Joseph S. Francisco\*

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11405 

DOI: 10.1021/jp509301t

Computational Study of the Thermochemistry of  $\text{N}_2\text{O}_5$  and the Kinetics of the Reaction  $\text{N}_2\text{O}_5 + \text{H}_2\text{O} \rightarrow 2 \text{HNO}_3$

I. M. Alecu and Paul Marshall\*

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11417

DOI: 10.1021/jp509468z

Size Effects on Cation Heats of Formation. III. Methyl and Ethyl Substitutions in Group IV  $\text{XH}_4$ , X = C, Si, Ge, Sn, Pb

Sydney Leach\*

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