

William R. Wiley

EMSL In Brief

Environmental Molecular Sciences Laboratory

Perspectives on Aromaticity Highlighted on Journal's Cover

By integrating experimental photoelectron research with computational resources, a frequent user of the Environmental Molecular Sciences Laboratory and his co-authors had their article "Aromaticity and antiaromaticity in transition-metal systems" featured on the cover of the January 14, 2008, issue of *Physical Chemistry Chemical Physics*.

An experimental chemist and frequent user of EMSL, Lai-Sheng Wang is an Affiliate Senior Chief Scientist at Pacific Northwest National Laboratory and a professor at Washington State University Tri-Cities. His colleague and co-author on this paper is Alexander Boldyrev, a professor of chemistry at Utah State University. The other authors are Dmitry Zubarev and Boris Averkiev from Utah State University, and Hua-Jin Zhai from Washington State University.

With previous studies, the authors have combined photoelectron spectroscopy in EMSL with computational resources at the Center for High Performance Computing, at Utah State University to show that aromaticity and antiaromaticity — which refer to a compounds' electronic nature, geometry, and other properties — are convenient tools for describing chemical bonding in planar cyclic clusters containing transition metals. In the 11-page article highlighted in PCCP, they provided perspectives on recent advances in this new research field.

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The authors research, featured on the cover of the journal, provides new perspectives on recent advances in the fields of aromaticity and antiaromaticity.

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