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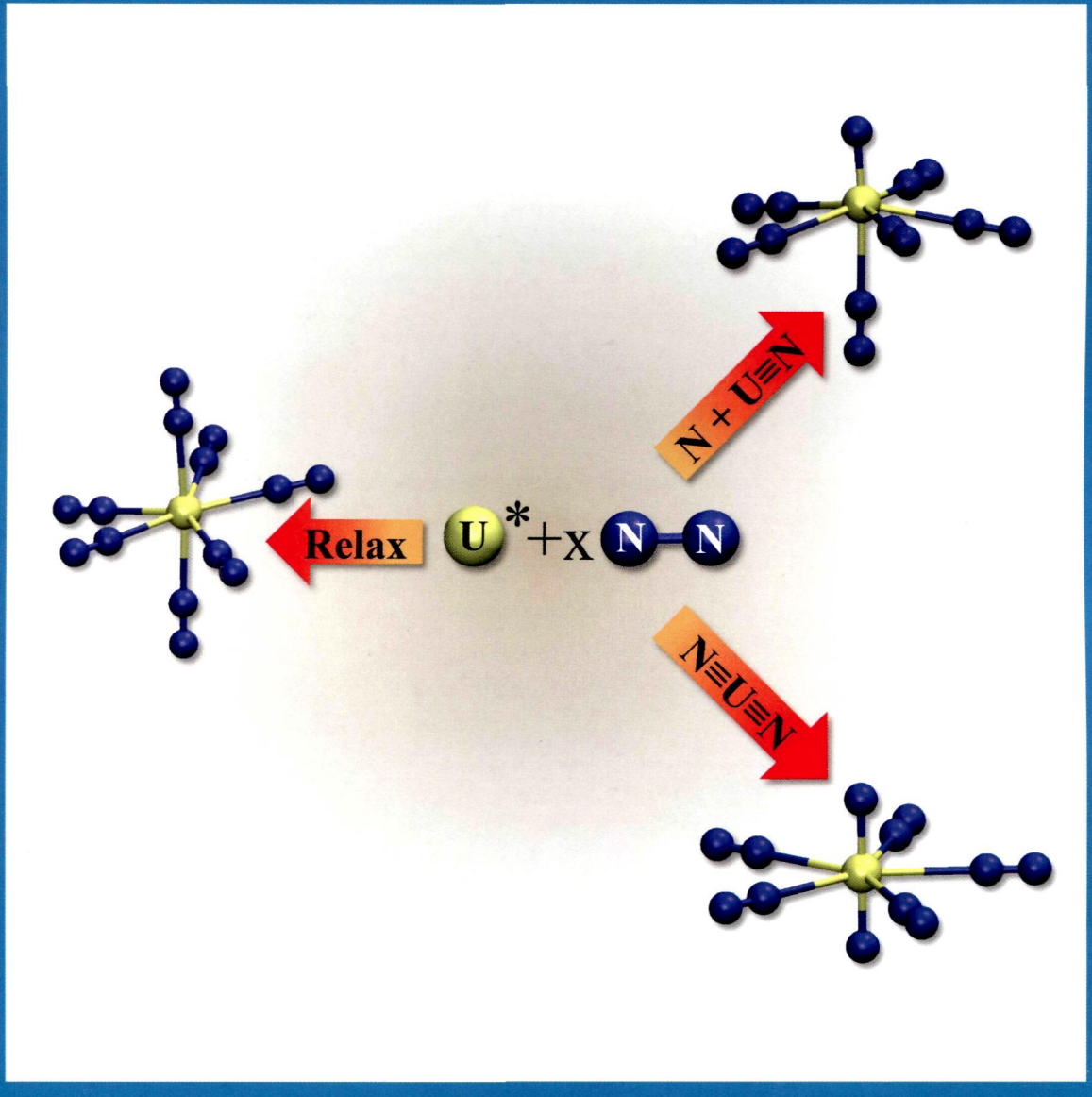

Excited Uranium Atoms React with Dinitrogen to Produce N≡U≡N, U≡N, and Their N≡N Complexes
(see page 5A)

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

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ON THE COVER: Laser-ablated excited and mercury arc excited U* react with N≡N molecules to produce the terminal uranium nitrides N≡U≡N and U≡N, which form the $UN_2(N_2)_{1,2,3,4,5}$ and $UN(N_2)_{1,2,3,4,5,6}$ complexes stepwise until the heptacoordinated limit is reached. Ground state U atoms coordinate seven dinitrogen molecules with a computed pentagonal bipyramidal structure. The average U−NN distance decreases in this series from 2.816 to 2.634 to 2.491 Å. See page 5289.

Articles

Kinetics and Dynamics

Spectroscopy, Photochemistry, and Excited States

Additions and Corrections

Ⓢ Supporting Information available via online article