

The copper carbonate azurite is

species that first appeared after

Earth's Great Oxidation Event (~2.4 Ga). Authors in this issue

suggest that azurite is thus a

4.6 cm crystal group from

biomarker; specimens like this

Touissit, Oujda, Morocco, are

worlds. IMAGE COURTESY OF JEFFREY

 $SCOVIL^{©}$; COLLECTION OF BRAD &

STARR VAN SCRIVER, HELIODOR

unlikely to be found on nonliving

one of thousands of mineral

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Mineral Evolution

Guest Editor: Robert M. Hazen



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The Evolution of Elements and Isotopes Hendrik Schatz



Mineral Evolution of Meteorites

Timothy J. McCoy



Mineral Environments on the Earliest Earth

Dominic Papineau



The Great Oxidation Event and Mineral Diversification

Dimitri A. Sverjensky and Namhey Lee



The Rise of Skeletal Biominerals

Patricia M. Dove



Themes and Variations in Complex Systems

Robert M. Hazen and Niles Eldredge

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