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Image: Jenny E. Sabin; installation: Peter Lloyd Jones, Jenny E. Sabin, Andrew Lucia, Annette Fierro/Sabin+Jones LabStudio, University of Pennsylvania

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The Silicate-Mediated Formose Reaction: Bottom-Up Synthesis of Sugar Silicates  
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Sugar growth and stabilization catalyzed by silicate ions is a possible prebiotic synthetic pathway.

Asymmetric Cooperative Catalysis of Strong Brønsted Acid–Promoted Reactions Using Chiral Ureas  
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100-Million-Year Dynasty of Giant Planktivorous Bony Fishes in the Mesozoic Seas  
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Climate, Critters, and Cetaceans: Cenozoic Drivers of the Evolution of Modern Whales  
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A succrose-trehalose glass film dried onto a filter

can preserve the activity of vaccine viral vectors.

RESEARCH ARTICLE: S-Nitrosylation from GSNOR

Deficiency Impairs DNA Repair and Promotes Hepatocarcinogenesis

W. Wei et al.

An enzyme that removes harmful marks from cellular

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Ancient Human Sequenced for First Time

Strands of hair paint detailed picture

of 4000-year-old Greenlander.

What Doesn’t Kill Microbes, Makes Them Stronger

Low levels of antibiotics trigger mutations

that cause resistance.

Is That Elephant Running? Don’t Bet on It

New study argues that, regardless of their speed,
elephants don’t actually run.

Nonlinear optical materials are designed

and characterized for potential applications

in all-optical switching.

J. M. Hales et al.

Loss Figures of Merit

Third-Order Optical Nonlinearities and

Design of Polymethine Dyes with Large

Third-Order Optical Nonlinearities and

Loss Figures of Merit

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Malgorzata Jedryczka’s system for detecting
crop pathogens has become a national
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Perspective: Audacity Is Overrated

E. Diamandis

The audacious approach to science is not the best
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