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False-color scanning electron micrograph of oriented vaterite, a crystalline polymorph of calcium carbonate, formed through template-controlled nucleation. Formation starts with the aggregation of prenucleation clusters forming an amorphous phase from which the crystals develop at the template surface. This experimental process may be analogous to the natural formation of seashells and other marine skeletons. See page 1455.

*Image: W. J. E. M. Habraken and C. J. van den Hoogen/
Eindhoven University of Technology*

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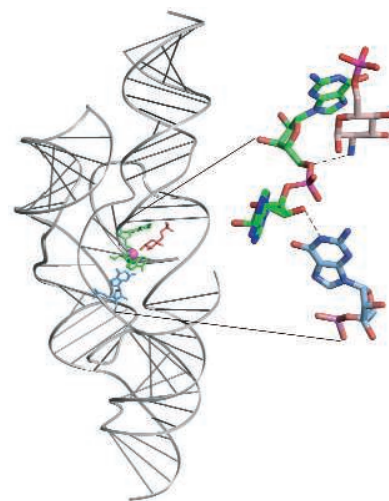
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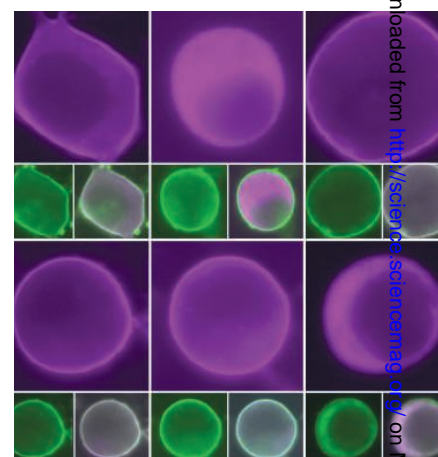
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Local DNA Topography Correlates with Functional Noncoding Regions of the Human Genome

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The molecular shape of DNA, as well as the nucleotide sequence itself, can have functional consequences and constrain evolution.

10.1126/science.1169050

Circadian Control of the NAD⁺ Salvage Pathway by CLOCK-SIRT1

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A transcriptional-enzymatic feedback loop controls interactions between metabolism and circadian rhythms in mouse cells.

10.1126/science.1170803

In Vivo Analysis of Dendritic Cell Development and Homeostasis

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10.1126/science.1168539

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full text at www.sciencemag.org/cgi/content/full/323/5920/1429b

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full text at www.sciencemag.org/cgi/content/full/323/5920/1429c

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Rac1 drives transcriptional programs in endothelial cells that alter endothelial barrier property and expression of neurotrophic factors.

PERSPECTIVE: When the Endogenous Hallucinogenic Trace Amine N,N-Dimethyltryptamine Meets the Sigma-1 Receptor

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PERSPECTIVE: Reversible Phosphorylation of Histidine Residues in Proteins from Vertebrates

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Access a database of structural, chemical, and functional attributes of small bioactive molecules; in Bioinformatics Resources.

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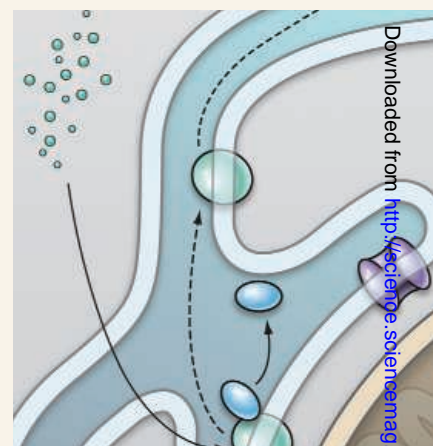
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