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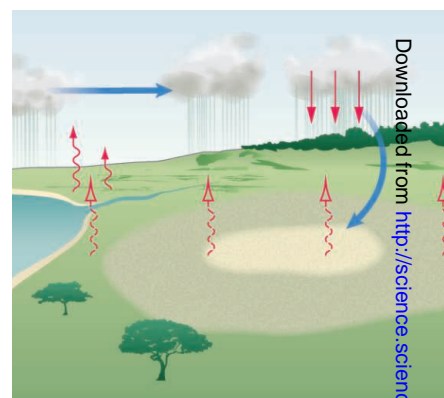
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ON THE WEB THIS WEEK

>> Science Podcast

Listen to stories on termite-inspired robots, cells with many, many genomes, and a roundup of stories from our daily news site.

>> Find More Online

Check out the latest in a series of Perspectives on Challenges in Climate Science at www.sciencemag.org/extra/climate.



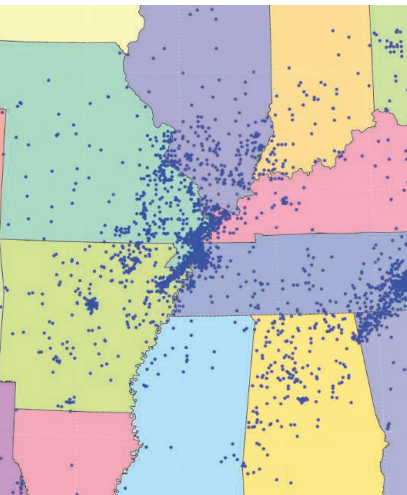
COVER

A multirobot construction system inspired by mound-building termites. Independent climbing robots with onboard sensors automatically build user-specified structures out of specialized brick-sized building material. The robots are limited to local sensing and coordinate their activity indirectly by manipulating their shared environment and reacting to what they encounter. See pages 742 and 754, as well as supplementary movies online at www.sciencemag.org/content/343/6172/754/suppl/DC1.

Photo: Eliza Grinnell, Harvard School of Engineering and Applied Sciences

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A. Pauli et al.
A conserved signal is identified that activates G protein-coupled receptors to promote zebrafish gastrulation.
Research Article Summary; for full text:
<http://dx.doi.org/10.1126/science.1248636>
- 747 **A Genetic Atlas of Human Admixture History**
G. Hellenthal et al.
Evidence of human migrations over the past 4000 years is identified in existing genomes.

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- 752 **Precise and Ultrafast Molecular Sieving Through Graphene Oxide Membranes**
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Graphene oxide membranes allow only very small hydrated molecules and ions to pass with an accelerated transport rate.
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J. Werfel et al.
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- 758 **High-Energy Surface X-ray Diffraction for Fast Surface Structure Determination**
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- 762 **The New Madrid Seismic Zone: Not Dead Yet**
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- 764 **Evolutionarily Dynamic Alternative Splicing of GPR56 Regulates Regional Cerebral Cortical Patterning**
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- 795 **An Antifreeze Protein Folds with an Interior Network of More Than 400 Semi-Clathrate Waters**
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