

Neuroscience

Hidden Mind Switches

Animal Behavior

Ants and the Art of War

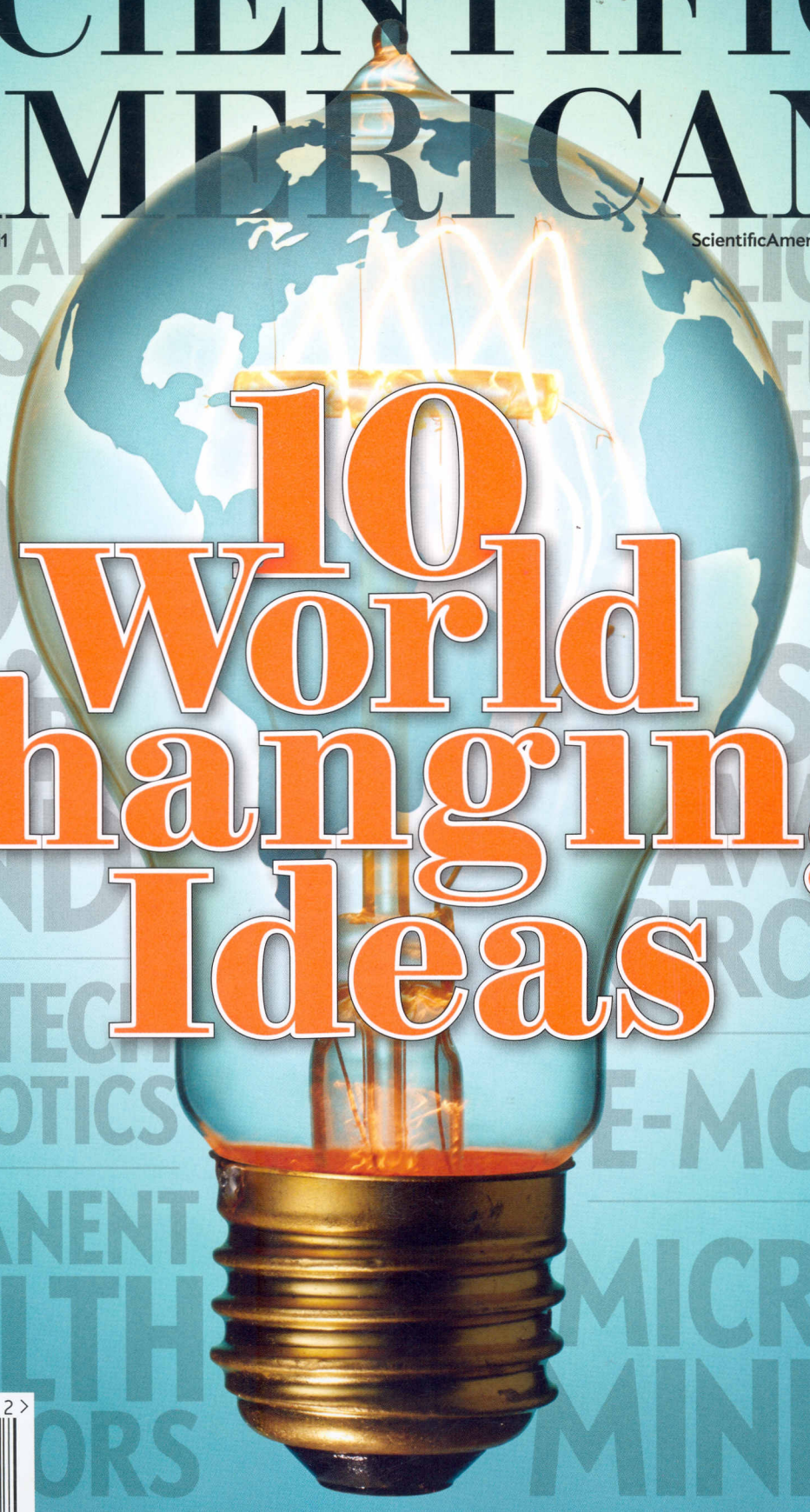
Space Science

This Way to Mars

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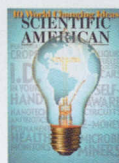
10 World Changing Ideas



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ON THE COVER



Our third annual "World Changing Ideas" special issue showcases 10 technologies and trends that will shape the future. In addition to stories on neural microchips, cryptocurrencies and nanotech antibiotics, we take a close look at an ambitious project to exploit the growing torrent of available data streams to model politics, culture, finance and the environment. Photographs by Dan Saelinger.



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Piscine profile: A live baby trout, in the second of the fish's four life stages, poses under a stereomicroscope for Canadian Robert Berdan, one of the photographers in the 2011 Olympus BioScapes competition.

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In conjunction with the article in this issue by Damon Landau and Nathan J. Strange, outlining a bold new proposal for manned interplanetary exploration, we look at what NASA's future holds—and what could have been.

Go to www.ScientificAmerican.com/dec2011/deep-space

