

BEST FROM SCIENCE JOURNALS: ICY CLOUDS ON MARS

Relevant for: Science & Technology | Topic: Science and Technology- developments and their applications and effects in everyday life

Illustration of NASA's Perseverance rover at work within the Jezero Crater on Mars. Credit: NASA/JPL-Caltech

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[Published in PNAS](#)

About four billion years ago, Mars had a water-rich environment. Despite receiving just 30% of the Earth's present-day sunshine, how did Mars have flowing rivers? A new study that used a computer model shows that Mars could have had a thin layer of icy, high-altitude clouds that caused a greenhouse effect.

Germany could lose last glaciers in 10 years

[Published in Nature](#)

An international team that studied all the world's glaciers - around 2,20,000 in total - found that over the past two decades glaciers have rapidly lost thickness and mass. "The situation in the Himalayas is particularly worrying," explains lead author Romain Hugonnet, in a release. "During the dry season, glacial meltwater is an important source that feeds major waterways such as the Ganges, Brahmaputra and Indus rivers. Right now, this increased melting acts as a buffer for people living in the region, but if Himalayan glacier shrinkage keeps accelerating, populous countries like India and Bangladesh could face water or food shortages in a few decades."

Published in [Science](#) and [JGR: Atmospheres](#)

Lightning bolts increase the atmosphere's ability to cleanse itself or breakdown greenhouse gases, a team of researchers found. The team noted that extreme amounts of hydroxyl radical (OH) and hydroperoxyl radical (HO₂) were discharged during lightning events. This OH initiates chemical reactions and breaks down molecules like the greenhouse gas methane.

[Published in PNAS](#)

The corals in the Gulf of Aqaba, at the northern tip of the Red Sea, have been known to be resistant to higher temperatures. By studying them at the laboratory researchers have now decoded the full molecular mechanism behind this resistance. The coral *Stylophora pistillata* has a rapid gene expression response and recovery pattern when exposed to heat stress. The team noted that the algae and bacteria they live in symbiosis with the coral can also withstand average temperatures 5°C higher than what they typically experience.

[Published in Science Advances](#)

A team of international researchers has developed a new method to extract metals directly from the parent ore deep inside earth. In the new technique, electrodes are drilled into an ore body

and an electric current is applied. The team says that this can transport the electrically charged metal ions, such as copper, through the rock via a process called electromigration.

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Some genes inherited from Neanderthals help defy the virus, others carry a risk of getting critically ill

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