

BEST FROM SCIENCE JOURNALS: ALIEN RADIOACTIVE ELEMENT

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

The warped shape of the stellar disk of the Milky Way galaxy, determined by mapping the distribution of young stars called Cepheids with distances set out in light years, is seen in this illustration released on August 1, 2019. | Photo Credit: [REUTERS](#)

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[Published in Science](#)

Researchers studying tiny traces of plutonium-244 and radioactive iron-60 collected from deep ocean crust noted that the two isotopes could be evidence of violent cosmic events that took place near Earth millions of years ago. "The story is complicated - possibly this plutonium-244 was produced in supernova explosions or it could be leftover from a much older, but even more spectacular event such as a neutron star detonation," lead author of the study, Anton Wallner said in a release.

[Published in Science Advances](#)

Inspired by leaves on a plant, researchers have now created a novel material that can capture light energy. The team writes that the material displayed an energy transfer efficiency of over 96%, making it one of the most efficient aqueous light-harvesting systems of its kind reported thus far. They add that it has potential applications in photovoltaics and bioimaging.

[Published in PNAS](#)

On July 16, 1945, the world's first nuclear explosion test took place at Alamogordo in New Mexico. A new material that formed accidentally during the blast has now been discovered. Similar to previously discovered quasicrystals, this new example also breaks the rules of classical crystalline materials. The new quasicrystal "was found in a sample of red trinitite, a combination of glass fused from natural sand and anthropogenic copper from transmission lines used during the test," notes the paper.

[Published in Nature Communications](#)

Major pollinators are struggling to survive in intensive croplands in the tropics, finds a new study. Over 4,500 pollinating species, including insects, birds and bats were studied. The team looked at over 300 studies covering 12,170 sites across North and South America, Europe, and Africa. Senior author Tim Newbold said in a release: "More than three-quarters of globally important food crops are at least partly reliant on animal pollination, including nuts, berries, and fruits grown in tropical areas. As a result, we may see reduced yields of the many tropical crops that depend on animal pollination."

[Published in Nature Astronomy](#)

About 10 billion years ago, the Milky Way galaxy merged with another satellite galaxy, known as

Gaia-Enceladus. A new study has now shown what happened to our galaxy after this merger event. The team writes that many of the stars that were already in the Milky Way ended up in the thick disc in the middle of the galaxy, while most that were captured from Gaia-Enceladus are in the outer halo of the galaxy. The researchers say that these studies will give a sharper view of the Milky Way's assembly history and evolution.

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Space Shuttle Endeavour was the fifth and final operational shuttle built as part of NASA's Space Shuttle programme. During its nearly two decades of active duty from May 1992 to May 2011, Endeavour embarked on 25 successful missions. A.S.Ganesh takes a look at some of the highlights from Endeavour's voyages...

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