

NASA built 3D working tools with Martian rocks and dust

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It has been two years since the journey to Mars. Over many important milestones, now, NASA prepares a fierce race to live in Mars in 2030 rather than on the Moon.

To make that journey a reality, astronauts will have to grow their own food, build their own shelter areas, repair the space equipment themselves. By transporting goods, material onto space is very limited.

Therefore, NASA created a method of using 3D printers to print items used in space such as labor tools, repair tools with materials from Moon stones, Mars rocks on Mars. fine.



Now, Northwestern University scientists have demonstrated that non-Earth-filled materials are suitable for tooling and can produce many more products and tools.

Currently, scientists have successfully created labor tools, building blocks made from pure moon rock, Mars rock through 3D printing technology developed by engineer Ramille Shah.

Shah, an assistant professor of materials science and engineering at Northwestern's McCormick School of Engineering, said: *'For other planets, which are certainly limited in human resources, we need to know. What will I do, use it to live and work on that planet '* . These 3D printing models are capable of 3D printing the

objects, tools, tools or structures needed to live in extraterrestrial environments.

Dust particles, Martian stones, Sun, Moon are simulated by NASA in the laboratory including composition, particle shape, material. And they can be built in 3D when combined with some simple solvents and polymers by a printer.

The materials after fabrication are not the same as the original moon and Mars rocks, they will be more flexible, more elastic, harder, more durable to survive in harsh Mars environments. In addition, these new materials can also be bent, rolled, and cut easily if needed. Now scientists are working to heat these materials in the furnace and turn them into a ceramic product like we often see.

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