

## 《新鲜事：星际旅行要实现了？》

核能作为一种优势明显的新能源，真是让人又爱又怕。核泄漏造成的灾难屡次出现，让它备受争议。人类何时才能真正的驾驭核能呢？

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Recent reports from scientists pursuing a new kind of nuclear fusion technology are encouraging, but we are still some distance away from the "holy grail of clean energy".

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The technology developed by Heinrich Hora and his colleagues at the University of NSW uses powerful lasers to fuse together hydrogen and boron atoms, releasing high-energy particles that can be used to generate electricity.

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As with other kinds of nuclear fusion technology, however, the difficulty is in building a machine that can reliably initiate the reaction and harness the energy it produces.

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### What is fusion?

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Fusion is the process that powers the Sun and the stars. It occurs when the nuclei of two atoms are forced so close to one another that they combine into one, releasing energy in the process.

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If the reaction can be tamed in the laboratory, it has the potential to deliver near-limitless baseload electricity with

virtually zero carbon emissions.

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The experiments with hydrogen and boron have certainly produced fascinating physical results, but projections by Hora and colleagues of a five-year path to realising fusion power seem premature. Others have attempted laser-triggered fusion. The National Ignition Facility in the US, for example, has attempted to achieve hydrogen-deuterium fusion ignition using 192 laser beams focused on a small target.

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These experiments reached one-third of the conditions needed for ignition for a single experiment. The challenges include precise placement of the target, non-uniformity of the laser beam, and instabilities that occur as the target implodes.

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These experiments were conducted at most twice per day. By contrast, estimates suggest that a power plant would require the equivalent of 10 experiments per second.

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That said, there is always room for smart innovation and new concepts, and it is wonderful to see all kinds of investment in fusion science.

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We know you have battleships that are not capable of interstellar travel.

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An interplanetary journey in a space ship.

3.????????????????????

Asteroid has become commonplace to the readers of interstellar travel stories in science fiction magazines.

4.????????????????????????????????

I just got this new sci-fi game based on the Star Trek show.

5.??????“????????”????“????????”

"Beam me Up Scotty," is a tagline from another television show, "Star Trek".

