

Enclosed tube maglev system tested in China

May 9 2014, by Nancy Owano



Credit: caijing.com.cn

A Chinese researcher's concept of a super-maglev reaching higher speeds was put to the test recently according to a detailed [report](#) appearing earlier this week in the *Daily Mail*.

"China's first manned megathermal superconducting [maglev](#) loop has been tested successfully by the Applied Superconductivity Laboratory of Southwest Jiaotong University." The researcher, Dr Deng Zigang, who is project lead, is focused on developments for a [high speed train](#) system of

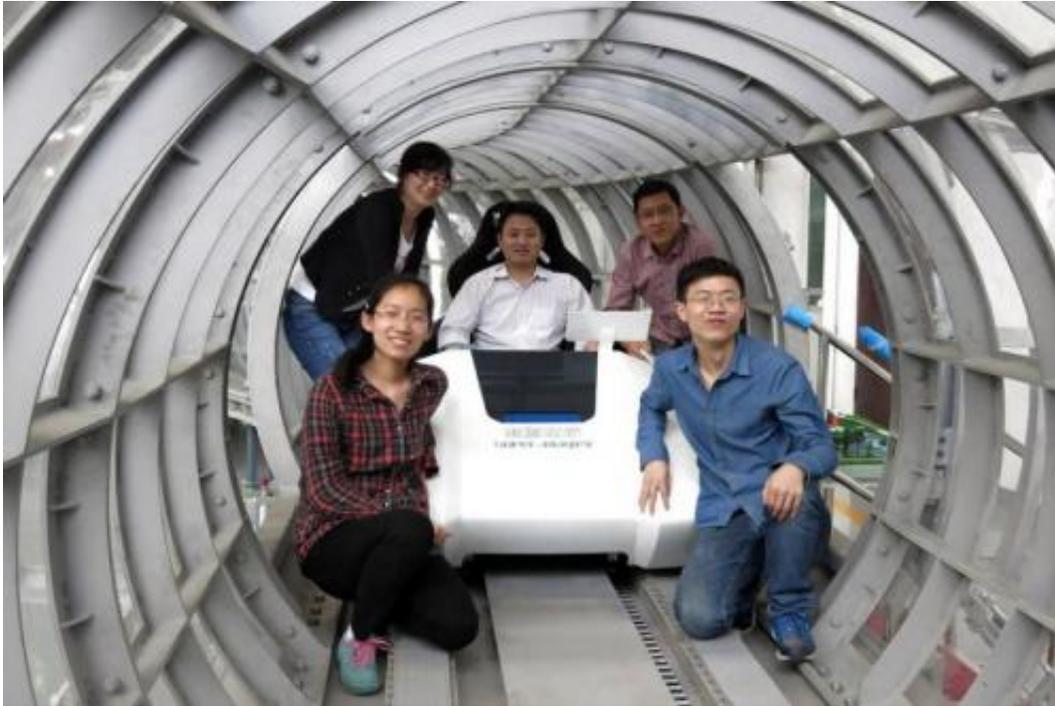
the future. He is an associate professor of the Applied Superconductivity Laboratory. His superspeed train concept involves an enclosed vacuum tube vehicle. *Gas 2* said air is the [limiting](#) factor on making even faster high-speed trains, but vacuum tubes operate in a vacuum, removing the air and letting even a low-power vessel operate at enormously high speeds. Maglevs make for very fast and smooth journeys but speeds are limited due to the excessive air resistance encountered at these speeds. The vacuum tube designs could allow trains to travel over seven times faster in the future, said the *Daily Mail*.

Are we looking at the future of train travel? Lidiya Grozdanic in Thursday's *Inhabitat* also [commented](#) on the significance of his work: With regular maglevs, more than 83 percent of traction energy is wasted through air resistance at speeds higher than 250mph. Zigang has a tube that lowers air pressure in the running environment to 10 times less than normal. She also noted that the higher speeds that could be achieved would be a big deal, as currently the fastest passenger-carrying train, the Shanghai Maglev Train, in contrast, reaches a high speed of 268 mph. Zigang said trains could reach speeds of up to 1,800 mph (2,897 km/h). The technology could be applied in military and space-launch systems.



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In the *Daily Mail* report, Zigang posed with the track where the super-maglev vehicle runs. The circle, said the report, is China's first manned megathermal superconducting maglev loop line, and is 12 meters in diameter.



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Zigang has been developing the technology for a number of years; Japan's researchers also look forward to making further progress in high-speed train systems. In 2012, Japan made considerable maglev news when it was announced that Japan was looking way beyond its bullet train system toward a next-generation, no-wheels maglev (magnetic levitation) system. New trains scheduled to go into use in 2027 are to link Shinagawa Station, in central Tokyo, with Nagoya and will travel at about 311 mph. The extended plan is to have the new trains connect Tokyo to Osaka by 2045.

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