

New transportation technology for microcargoes

February 18 2008

Scientists in Japan are reporting the discovery of a new transportation technology for moving ultra-small cargoes in the coming generation of micromachines and laboratories-on-a-chip. The report by Kenichi Yoshikawa and colleagues is scheduled for the March 6 issue of ACS' *Journal of Physical Chemistry*.

The study describes successful delivery of a simulated microcargo of paper with chemical waves produced by a reaction that has fascinated scientists and students for 50 years. Termed the Belousov-Zhabotinsky (BZ) reaction, it produces a continuing series of waves in a water solution.

In the report, researchers describe the first use of those waves to move objects in a directed, controlled fashion. "They can be used for the transport of material objects through a desired delivery route," the report states. "The combination of carrying and controlling waves with the proper timing of initiation allows us, in principle, to deliver freight over a chosen path, with the ability to switch the path if desired."

Source: ACS

Citation: New transportation technology for microcargoes (2008, February 18) retrieved 23 April 2024 from <https://phys.org/news/2008-02-technology-microcargoes.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.