Fast and Scalable Fabrication of Microscopic Optical Surfaces and Its Application for Optical Interconnect Devices

Title: Fast and Scalable Fabrication of Microscopic 3D Optical Surfaces and Interconnect Devices

Invention: Researchers at the University of Arizona have developed and demonstrated a new technique for fabricating 1-micron scale optics and optical interconnects at a fairly high rate of speed and compatible with semi-conductor fabrication (CMOS) processes. The process is relatively inexpensive, utilizing off-the-shelf components arranged in a novel way, addressing the need for competitively priced small scale 1:1 ratio optics and interconnects.

Advantages:
* can produce 1-um scale optics with a 1:1 shape ratio
* fast production
* compatible with semi-conductor fab processes
* uses off-the-shelf components

Applications:
* Small medical imaging tools for endoscopy, laparoscopy, and robotic surgery
* Consumer electronics
* Semiconductor components
* Optical interconnects

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