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COVER Schematic representation of how matter can be organized in optical standing waves formed by interfering laser beams. Here five beams force the microscopic spheres into a quasi-crystalline lattice. The red spots in the background indicate the fivefold diffraction pattern obtained from a separate probe laser. See page 749. [Illustration courtesy of M. Burns and J. Scarpetti, Rowland Institute]

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Science

249 (4970)

Science **249** (4970), 719-811.

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