INDUSTRY *outlook*

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A simple and quick method to make extremely fine metal powders has been pioneered by chemists at the University of Illinois at Urbana-Champaign. The resulting highly magnetic powders have potential uses in information storage and magnetofluid seals, lubricants and bearings, according to Kenneth Suslick, a professor of chemical sciences. The technique essentially blasts liquid metal with short-duration, high-intensity ultrasound. The noise forms and grows small gas bubbles in the liquid, which then implode, creating transient temperatures of up to 9,000F and pressures of about 1,000 atmospheres. The reaction breaks down vapors containing metal compounds inside the bubbles into individual atoms, which then cluster into clumps of a few hundred atoms with aligned atomic spins. The magnetic moment of these clusters is 100 times that of normal material.