

# MRS BULLETIN

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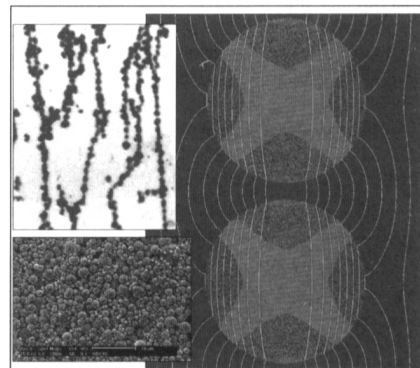
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**ON THE COVER:** (Right) Predictions of a magnetostatic finite-element model of a magnetorheological (MR) fluid. Shown is a contour plot of the magnetization induced by an applied magnetic field in two adjacent spheres embedded in an infinite chain. The applied field points upward. Superimposed on the plot are lines of magnetic flux (white lines). Flux concentration in the polar regions of each particle causes local saturation of the particle magnetization (red), a phenomenon that controls the MR behavior of these materials in all but the lowest applied magnetic fields. For more information, please see the article by J.M. Ginder on p. 26 of this issue.

(Top Left) Video image of a field-induced particle chain in a 2-wt% suspension of alumina particles (63–90  $\mu\text{m}$ ) in silicone oil between parallel-plate electrodes, with an electric field of 500 V/mm. For more information, see the article by D.J. Klingenberg on p. 30 of this issue.

(Bottom Left) Scanning-electron-microscopy micrograph of carbonyl iron particulates used in the synthesis of MR fluids. For more information, see the article by P.P. Phulé on p. 23 of this issue.

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