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Abstract for an Invited Paper
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Metamagnetism in Heavy Electron Materials and Correlated Oxides .

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Metamagnetism in itinerant magnets will be reviewed[1,2,3]. Recent nonlinear magnetization, ultrasound and magnetostriction work on heavy fermions and correalted oxides will be presented. The appeal of the 'single energy scale model' developed in the context of these new measurements will be critically examined. Notable deviations from this model will be discussed. [1] "Universality in the Nonlinear Magnetic Response of Strongly Correlated Metals", B.S. Shivaram, D.G. Hinks, M.B. Maple and P. Kumar, Phys. Rev., B89, 241107(Rapid Communication), 2014. [2] "Metamagnetism and the Fifth Order Susceptibility in UPt3", B.S. Shivaram, Brian Dorsey, D.G. Hinks and Pradeep Kumar, Phys. Rev., B89, 161108(Rapid Communication), (2014). [3] "High Field Ultrasound Measurements in UPt3 and the Single Energy Scale Model of Metamagnetism", B.S. Shivaram, V.W. Ulrich, P. Kumar and V. Celli, Phys. Rev.B, 91, 115110, 2015. [4] "Metamagnetism", E. Stryjewski and N. Giordano, Advances in Physics, 26,487, (1977). a Work done in collaboration with Vittorio Celli and Gia-Wei Chern (U.Virginia), the Maple group at UCSD, A. Thamizhavel and S. Ramakrishnan (TIFR, India), and D. Phelan and U. Welp (Argonne National Labs), Marcelo Jaime (LANL) and Pradeep Kumar (U.Florida).