

Abstract Submitted
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A novel time resolved resonance Raman technique - applications in correlated systems B. SCHULZ, I. MAHNS, A. GOOS, P. SAICHU, S. BINDER, S.G. SINGER, A. RUSYDI, M. RUEBHAUSEN, Institute of Applied Physics, University of Hamburg, D-20355 Hamburg, Germany, S.-W. CHEONG, Department of Physics and Astronomy, Rutgers University, Piscataway, New Jersey 08854, USA, P. GUPTASARMA, Department of Physics, University of Wisconsin, Milwaukee, Wisconsin 53211, USA — In many modern materials the functionality of a system can be observed by studying the order parameters in the time domain. Here, we present a time resolved pump probe resonance Raman system that allows to study order parameters in an energy range from 5 meV to several eV and in a time domain from 1 ps to several ns. Due to our fully achromatic, all reflective Raman spectrometer, [1] we are able to combine pump and probe beams ranging in energy from the near infrared to the deep ultraviolet. We show exemplary measurements on the melting process in charge order Manganites ($\text{La}_{0.5}\text{Ca}_{0.5}\text{MnO}_3$) as well as studies on the temporal evolution of the superconducting parameter in high- T_c cuprates. [1] B. Schulz *et al*, Rev. Sci. Instrum. **76**, 73107 (2005).

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