

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Optoelectronics of transition metal dichalcogenides decorated with gold nanoparticles¹ S.B. DIEFENBACH, E. PARZINGER, J. KIEMLE, B. MILLER, J. WIERZBOWSKI, R. CSIKI, A. CATTANI-SCHOLZ, M. STUTZMANN, J.J. FINLEY, U. WURSTBAUER, A.W. HOLLEITNER, WSI and Physics Department, TUM, 85748 Garching, Germany — We report on Raman and photoluminescence experiments on monolayers (ML) of MoS_2 and WSe_2 , covered with octanethiole stabilized gold nanoparticle arrays. We observe an enhanced photoluminescence signal due to the decoration with gold nanoparticle arrays. Power-dependent Raman scattering experiments show a decrease of the normalized Raman intensity of the A_{1g} and E_{2g}^1 phonon mode for gold nanoparticle decorated MLs.

¹We acknowledge financial support by the ERC project NanoREAL.

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Date submitted: 09 Nov 2016

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