

MAR17-2016-020677

Abstract for an Invited Paper  
for the MAR17 Meeting of  
the American Physical Society

**Light matter quantum interface based on single colour centres in diamond**

FEDOR JELEZKO, Ulm University

Efficient interfaces between photons and atoms are crucial for quantum networks and enable nonlinear optical devices operating at the single-photon level. In this talk I will highlight properties of single color centers at low temperatures and show that single SiV and GeV color centers in diamond are promising candidates for creating such interfaces. I will also show experiments towards realization of fully integrated, scalable nanophotonic quantum devices..