

Abstract Submitted  
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**Measurement of Casimir force with magnetic materials Alexandr Banishev, Chia-Cheng Chang, Umar Mohideen Department of Physics and Astronomy, University of California, Riverside, USA** ALEXANDR BANISHEV, CHIA-CHENG CHANG, UMAR MOHIDEEN , Department of Physics and Astronomy, University of California, Riverside — The Casimir effect is important in various fields from atomic physics to nanotechnology. According to the Lifshitz theory of the Casimir force, the interaction between two objects depends both on their dielectric permittivity and magnetic permeability. Thus the role of magnetic properties on the Casimir force is interesting particularly due to the possibility of a reduction the Casimir force. In this report we will present the results of a Casimir force measurement between a magnetic material such as nickel coated on SiO<sub>2</sub> plate and a Au-coated sphere.

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