Abstract:

The oscillatory wake potential of a moving test charge is studied in quantum dusty plasmas. The

plasma system consisting of electrons, ions and negatively charged dust species is embedded in an

ambient magnetic ﬁeld. The modiﬁed equation of dispersion is derived using a Quantum

Hydrodynamic Model for magnetized plasmas. The quantum effects are inculcated through Fermi

degenerate pressure, the tunneling effect and exchange-correlation effects. The study of oscillatory

wake is important to know the existence of silence zones in space and astrophysical objects as well

as for crystal formation. The graphical description of the potential depicts the signiﬁcance of the

exchange and correlation effects arising through spin and other variables on the wake potential.

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Consultant ORIC,

Office of Research, Innovation and Commercialization, Principal Seat,  
4th Floor, Faculty Block-2, COMSATS Institute of Information Technology,  
Park Road, Islamabad

Date: 25-11-2017

Subject: Bank statement of NRPU project 20-1841.

Sir,

Here is attached bank statement of our completed NRPU project 20-1841, title ''Novel bioactive composites based on hyperbranched polymers for dental applications.'' for further submission to Higher Education Commission.

Thanking you in anticipation.

Yours Sincerely,

Dr. Anila Asif

Professor

Principal Investigator

Interdisciplinary Research Centre in Biomedical Materials (IRCBM)

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