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## Letter of Appreciation

I take this opportunity to mention about **Dr. T.Senthil Siva Subramanian** whom happened to be my scholar of Student Research Committee (SRC) during his PhD work at IIT Delhi.

First of all, let me congratulate Dr. Subramanian for his exemplary efforts and dedication in completing his Doctoral Research from IIT Delhi in spite of his regular job work. I must appreciate his commendable contribution to his research work at IIT Delhi.

I had the chance to review his PhD work starting from 2013 till 2019 nearly 6+ years every semester during the semester research presentation. I found his research work excellent, satisfactory and outstanding especially his meticulous commitment towards his research.

I must mention few summaries of his research work.

Dr. Senthil worked on plasmonic hydrogen gas sensing which happens to be one of the promising areas especially hydrogen being the national and global importance. Dr Senthil has modelled different plasmonic structures such as nano-grating, nanopillars and plasmonic waveguides for hydroge gas sensing. He explored novel plasmonic materials such as palladium, yttrium which possess high sensing property at room temperature. Further he had hands-on experience on electromagnetic simulations such as Rigorous Coupled Wave Analysis [RCWA] to simulate the nano structures. The designed sensors in his research work are promising for hydrogen gas sensing.

Dr. Senthil has carried out extensive research work with patience using numerical modelling and such novel approaches are highly valuable in scientific, engineering and technology research and he has proven good competence in scientific approach. The research has outstanding outcomes in the form of international publications and Indian patent as well.

I wish him good luck for future research career and also recommend him for any academic institutions, research laboratories and industries as well.

With Best Regards

Dr. P. K. Muduli

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