

## DEPARTMENT OF PHYSICS

Centre of Advanced Study in Physics

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It is pleasure for me to record that Dr. D.P.Rai from Department of Physics, Pachhunga University, Aizawl, has worked in our research group under INSA fellowship from 12/12/2016 to 08/01/2017. He has worked on three problems using DFT theory. He calculated the electronic and thermoelectric properties of  $\text{HfPtPb}$ , a half-Heusler (HH) compound using density functional theory and semi-classical Boltzmann transport equation with constant time approximation. He has also worked on Electronic bandgap modulation of mono and bilayer  $\text{ZnS}$  under applied electric field and mechanical strain. These works have been culminated in writing two research papers which shall be communicated to reputed peer reviewed journals

In the process, he has gained hand on working experience with DFT software packages like SIESTA, Quantum Espresso, BoltzTrap and ShengBTE codes.

Dr. D.P.Rai has a pleasant personality, takes initiatives and is a good researcher. He worked in our research group with great enthusiasm. Hope that we can collaborate in various research areas in future also. I wish him all the best for his future endeavors.

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