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Forwarded

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(Head) Department of Physics Indian Institute of Technology (Banaras Hindu University) Varanasi Varanasi- 221005, India. I, Pravin Kumar, research scholar under the supervision of Prof. Prabhakar Singh, Department of Physics, IIT (BHU) Varanasi give undertaking that the thesis entitled "Structural and electrical investigations on rare earth doped perovskite and double perovskite systems as an anode for solid oxide fuel cells" submitted by me for the degree of Doctor of Philosophy is a record of first-hand research work carried out by me during the period of study.

I avail myself to responsibility such as an act will be taken on the behalf of me, mistakes, errors of facts, and misinterpretation are of course entirely my own.

Date :

Place : Varanasi

(Pravin Kumar)



COURSE WORK / COMPREHENSIVE EXAMINATION COMPLETION CERTIFICATE

This is to certify that **Mr. Pravin Kumar**, a bonafide research scholar of Department of Physics, Indian Institute of Technology (Banaras Hindu University) Varanasi has sucessfully completed the course work/comprehensive examination requirement which is a part of his Ph.D. programme.

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PH.D. PRE-SUBMISSION SEMINAR CERTIFICATE

This is to certify that Mr. Pravin Kumar, a bonafide research scholar of Department of Physics, Indian Institute of Technology (Banaras Hindu University) Varanasi has sucessfully presented/completed the pre-submission seminar on the thesis entitled "Structural and electrical investigations on rare earth doped perovskite and double perovskite systems as an anode for solid oxide fuel cells" dated 03.06.2016, which is an essential part of his Ph.D. programme.

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Title of the Thesis: **Structural and electrical investigations on rare earth doped perovskite and double perovskite systems as an anode for solid oxide fuel cells**

Candidate's Name: Pravin Kumar

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