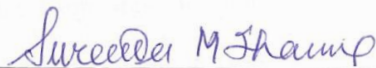


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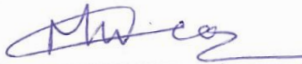
Recommendations of the Viva Voce Board

As members of the Viva Voce Board, we certify that we have read the dissertation prepared by **Nitya Ramanan** entitled “**XAFS characterization of disordered nanoclusters and augmentation of Indus-2 XAFS beamlines for extreme thermodynamic conditions**” and recommend that it may be accepted as fulfilling the thesis requirement for the Degree of Doctor of Philosophy.



Date: 22.09.2015

Chairman- Prof. S. M. Sharma



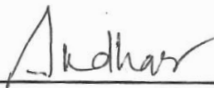
Date: 22/09/2015

Guide / Convener- Prof. M.N. Deo



Date: 22/9/2015

Member 1- Prof. N.K. Sahoo



Date: 22/09/2015

Member 2- Prof. S.K. Dhar

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copies of the dissertation to HBNI.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it may be accepted as fulfilling the thesis requirement.

Date: 22/09/2015

Place: HBNI, A. Nagar



Dr. M.N. Deo

(Guide)