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Faculty Development Program on
Physics and Technology of Materials
Department of Applied Science, ABV-IIITM, Gwalior
8-14 October, 2018



Objective:

The aim and objective of a Faculty Development Program is not only to organise just an orientation programme emphasizing the teachers as agents of socio-economic change and national development but also keeping themselves ready to be part of the changing dynamics of teaching- learning pedagogy, in the last 4-5 years. In every academic discipline, there has been a knowledge explosion and hence, same is in Materials Science and its allied disciplines. The college/university teachers, engaged in teaching and research under this umbrella, must keep themselves updated in their chosen field of research/teaching, or run the risk of becoming totally outdated in a very short period of time. In the last two decades, various scientific achievements have been reported in Materials Science, in terms of new materials and technologies from Graphene to GaN based, to meet out the current scientific challenges. In light of this, the objectives of this Faculty Development Program of one week duration are given as follows:

- In general to learn physics and in particular to recapitulate and to refresh the knowledge of serving teachers of Engineering Physics and Allied subjects
- To inculcate the culture of learning and self-improvement amongst teachers thereby enhancing the quality of teaching for the students.
- To provide opportunities for teachers to exchange experience with their peers
- To provide a forum for serving teachers to keep abreast of the latest advances in physics by interacting with the Senior Scientists
- This one week activity has also been planned with an objective of fulfilling the API requirement of every faculty.

Highlights of the FDP:

- Opportunity to interact with the Faculty from India and Abroad
- One Day Excursion/Sightseeing of Local Places
- One day special dinner with musical evening
- Hands on Sessions on Material Modelling using DFT based ab-initio tools



Eligibility and Pre-requisites:

Course has been specifically designed keeping in mind the young academicians currently teaching or will be joining teaching soon in the area of Solid State Physics/Materials Science. Lecturers / Assistant Professor / Research Scholars.

Registration and Course Fee:

Rs. 5000 includes the registration kit, entry to different sessions, lunch and tea/drink during the session breaks. Registration fee must be paid through NEFT/RTGS to following account detail:

Account Name: ABV-IIITM FDP Account
Bank Name : Bank of India
A/C No. 945210110009380
IFSC Code: BKID0009462
MICR 474013010
Branch : ABV-IIITM Campus Branch, Gwalior

Accommodation:

For outstation participants, the discounted (Rs. 300/- per day per person) shared accommodation may be provided on request in International Visitors Guest House.

Topics:

Topics will be covered under the umbrella of Condensed Matter Theory and Experiments with a focus on Physics and Technology of Materials

Resource Person:

Tentative List:

Prof. Dr. Jürgen Bosse	Freien Universität Berlin	http://users.physik.fu-berlin.de/~bosse/index.html
Prof. Vikram Kumar	IIT Delhi	http://www.qai.org.in/Profile-VikramKumar.asp
Prof. G. S. Singh	IIT Roorkee	https://www.iitr.ac.in/departments/PH/pages/People+Faculty+gssaafph.html
Prof. B. R. Mehta	IIT Delhi	http://web.iitd.ac.in/~brmehta/
Prof. G. D. Verma	IIT Roorkee	https://www.iitr.ac.in/departments/PH/pages/People+Faculty+gvarfph.html
Dr. Anirban Mitra	IIT Roorkee	https://www.iitr.ac.in/departments/PH/pages/People+Faculty+mitrafph.html
Dr. Pankaj Srivastava	ABV-IIITM, Gwalior	https://www.researchgate.net/profile/Pankaj_Srivastava7
Dr. Anurag Srivastava	ABV-IIITM Gwalior	https://www.researchgate.net/profile/Anurag_Srivastava7

Lecture Notes: (will be uploaded)

General Note:

A soft copy/hardcopy format of the application form signed by the applicant along with a recent detailed CV must reach to any of the Course Coordinators, FDP on Physics and Technology of Materials, latest by ~~15th Sep, 2018.~~

30 Sep, 2018

For any further details or query, please email to: fdp-PTM@gmail.com or contact the Course Coordinators

Dr. Anurag Srivastava

Office-110, First Floor, Block-E
ABV-IIITM Campus
Morena Link Road
Gwalior (M.P.)
Tel: 0751-2449826
Email: anurags@iiitm.ac.in | profanurag@gmail.com
<http://tiicliitm.com/profanurag/>
<http://scholar.google.co.in/citations?user=ZIScsqMAAAAJ&hl=en>
https://www.researchgate.net/profile/Anurag_Srivastava5

Dr. Pankaj Srivastava

Office-101, First Floor, Block-E
ABV-IIITM Campus
Morena Link Road
Gwalior (M.P.)
Tel: 0751-2449814
Email: pankajs@iiitm.ac.in | pankajgw143@gmail.com
<http://www.iiitm.ac.in/?q=users/pankajs>
<https://scholar.google.com/citations?user=aFDIvk0AAAAJ>
https://www.researchgate.net/profile/Pankaj_Srivastava7



**Tentative Schedule for Faculty Development Programme on
Physics and Technology of Materials**

(Oct 08-14, 2018)

Date	9:30- 11:00 AM	11:- 11:30 AM	11:30- 1:00 PM	1:00 2:00 PM	2:00-3:30 PM	3:30 3:45 PM	3:45-5:15 PM
08/10/ 2018	Inauguration and Talk: Prof. Bosse and Prof. Vikram Kumar	T E A B R E A K A N D N E T W O R K I N G	Experimental: Synthesis Tools and Techniques	L U N C H B R E A K A N D N E T W O R K I N G	Experimental: Synthesis Tools and Techniques	T E A B R E A K A N D N E T W O R K I N G	Experimental: Synthesis Tools and Techniques
09/10/ 2018	Theory: Prof. Bosse / Prof. G S Singh		Experimental: Characterization Tools and Techniques		Experimental: Synthesis Tools and Techniques		Experimental: Synthesis Tools and Techniques
10/10/ 2018	Theory: Prof. Bosse / Prof. G S Singh		Special Session: Nanomaterials		Special Session: Quantum Computing		Special Session: Quantum Mechanics
11/10/ 2018	Theory: Prof. Bosse / Prof. G S Singh		Special Session: Equation of State and Phase Transitions		Special Session: Material modeling approaches		Special Session: Research Methodology
12/10/ 2018	Theory: Prof. Bosse / Prof. G S Singh		Special Session: Modeling and Simulation		Excursion tour: Gwalior		Excursion tour: Gwalior
13/10/ 2018	Nanomaterial: Electronic Properties Hands-On		Nanomaterial: Electronic Properties Hands-On		Nanomaterial: Electronic Properties Hands-On		Nanomaterial: Electronic Properties Hands-On
14/10/ 2018	Presentations: By participants		Presentations: By participants		Presentations: By CNTL Research Scholar		Closing Ceremony: Certificate distribution

Course Coordinators:
Dr. Anurag Srivastava (09826189049) and Dr. Pankaj Srivastava (09425121627)
anurags@iiitm.ac.in | pankajs@iiitm.ac.in

