

**Intikhab Ulfat**

Postdoctoral Researcher

MAX-Lab, Ole Rönners väg 1, SE-22100 Lund, Sweden

E-mail: [intikhab@chalmers.se](mailto:intikhab@chalmers.se)

Permanent Position: Assistant Professor, Department of Physics, UoK, Karachi, Pakistan

**EDUCATION****• Ph. D.**

Chalmers University of Technology, Göteborg, Sweden (2012)

*Title of Thesis:**Detailed Photoemission Studies of prototype diluted magnetic semiconductor (GaMn)As***• Diploma in Higher Education**

Centre of Competence and Knowledge Building in Higher Education (CKK)

Chalmers University of Technology, Göteborg, Sweden (2011)

**• Licentiate**

Chalmers University of Technology, Sweden (2010)

*Title of Thesis:**Annealing induced modifications in (GaMn)As: Electron Spectroscopic Studies***• MS (Physics of Matter, Materials and Biological Systems)**

Göteborg University, Göteborg, Sweden (2008)

*Title of Thesis:*

As3d core level studies of (GaMn)As annealed under As capping

**• M.Sc. (Physics with specialization in Solid State Physics)**1<sup>st</sup> Class, University of Karachi, Pakistan (1992)**• B.Sc. (Hons.) with Physics as major subject**1<sup>st</sup> Class, University of Karachi, Pakistan (1991)**PEDAGOGICAL EXPERIENCE****• Assistant Professor**Department of Physics, University of Karachi, Karachi, Pakistan  
(22-04-2006 till to-date)**• Lecturer**Department of Physics, University of Karachi, Karachi, Pakistan  
(17-01-2001 to 22-04-2006)**• Lecturer (Co-operative)**Department of Physics, University of Karachi, Karachi, Pakistan  
(17-01-2001 to 22-04-2006)**• Lecturer**Department of Basic Sciences, Baluchistan University of Engineering & Technology  
Khuzdar, Pakistan  
(14-11-1994 to 31-12-1998)**• Lecturer**Department of Physics, Baluchistan Residential College, Loralai, Pakistan  
(01-01-1995 to 13-11-1994)**• Lecturer (Co-operative)**Department of Physics, University of Karachi, Karachi, Pakistan  
(01-07-1993 to 31-12-1994)**PROFESSIONAL MEMBERSHIPS*****National:***

Karachi Physics Society, Pakistan Physical Society, Pakistan Society of Semiconductor Science and Technology

***International:***

International Solar Energy Society, European Physical Society, European Materials Research,

Institute of Physics, International X-ray Absorption Fluorescence Society, Optical Society of America

## SCIENTIFIC EVENTS ATTENDED

- 01. *Workshop on Solid State Physics***  
University of Karachi, Karachi, Pakistan (August 17-20, 1991)
- 02. *Symposium on Trends in Physics***  
University of Karachi, Karachi, Pakistan (September 26-27, 1992)
- 03. *2<sup>nd</sup> Tutorial Course and Symposium in Topics of Semiconductors***  
University of Karachi, Karachi, Pakistan (17-19 April, 2000)
- 04. *Training Course in Physics***  
University Grants Commission, Karachi, Pakistan (20-25 November, 2000)
- 05. *2<sup>nd</sup> International Conference on Physics Education***  
Centre of Physics Education, Karachi, Pakistan (7-10 February, 2003)
- 06. *5<sup>th</sup> SESAME Users Meeting and Workshop on Molecular Crystallography***  
Alexandria & Cairo, Egypt (29 November -2 December, 2006)
- 07. *5<sup>th</sup> Nordic Winter School in Particle Physics and Cosmology***  
Gausdal, Norway (7-12 January, 2007)
- 08. *Higher Structures in Geometry and Physic***  
Paris, France (15-19 January, 2007)
- 09. *4<sup>th</sup> Scandinavian Workshop on Scattering from Soft Matter***  
MAX-lab, Lund, Sweden (1-2 February, 2007)
- 10. *6<sup>th</sup> Research Course on New X-Ray Sciences at DESY***  
Hamburg, Germany (28 Feb. - 02 March, 2007)
- 11. *38<sup>th</sup> IFF Spring School-Probing the Nanoworld***  
Jülich, Germany (12 – 23 March, 2007)
- 12. *International Conference on Nanoscale Magnetism (ICNM-2007)***  
Istanbul, Turkey (25-29 June, 2007)  
Poster Presentation
- 13. *32<sup>nd</sup> International Nathiagali Summer College (INSC-2007)***  
Nathiagali, Pakistan (2-8 July, 2007)  
Poster Presentation
- 14. *International Conference on Neutron & X-ray Scattering (ICNX-2007)***  
Bandung, Indonesia (29-31 July, 2007)  
Poster Presentation
- 15. *National Workshop on Crystal Structure Determination using Powder XRD***  
University of Punjab, Lahore, Pakistan (2-8 July, 2007)
- 16. *5th International Conference New Trends in Materials Science (ARM-5)***  
Sibui, Romania (5-7 September, 2007)  
Poster Presentation
- 17. *9th Annual Conference of the Yugoslav Materials Research Society (YUCOMAT-2007)***  
Herceg Novi, Montenegro (10-14 September, 2007)  
Poster Presentation
- 18. *Chalmers Initiative Seminar- Shaping the Materials for Tomorrow***  
Chalmers University of Technology, Göteborg, Sweden (7-8 November, 2007)
- 19. *Nordic and European Summer School VUV and X-ray Research for the Future using FEL's and Ultra Brilliant Sources***  
Odengården and MAX-lab, Sweden (May 26 - June 2, 2008)  
Poster Presentation
- 20. *International Conference on Nanotechnology: Opportunities and Challenges (ICON-008)***  
Centre of Nanotechnology, KAU, Jeddah, Saudi Arabia (17-19 June, 2008)  
Oral Presentation
- 21. *40th EGAS Conference***  
Institute of Experimental Physics, TU Graz, Graz, Austria (2-5 July, 2008)  
Poster Presentation
- 22. *21st MAX-lab Annual Users Meeting***  
MAX-lab, Sweden (20-22 October, 2008)  
Poster Presentation
- 23. *Materials Master Class***  
Espoo, Finland (24 – 25 August, 2009)

- 24. 6th International Conference on New Horizons in Industry, Business and Education** Santorini Island, Greece (27-28 August, 2009)  
Poster Presentation
- 25. Conference on Physics Teaching in Engineering Education**  
Wroclaw University of Technology, Wroclaw, Poland (10-12 September, 2009)  
Poster Presentation
- 26. 22<sup>nd</sup> MAX-lab Annual Users Meeting**  
MAX-lab, Sweden (2-4 November, 2009)  
Poster Presentation
- 27. 2<sup>nd</sup> International Conference Physics and the World Today**  
University of Karachi, Karachi, Pakistan (16 -17 December, 2009)  
Oral Presentation
- 28. Summer School on Computational Materials Sciences**  
Donostia Physics Center, San Sebastian, Spain (28th June – 3th July, 2010)  
Poster Presentation
- 29. 23<sup>rd</sup> MAX-lab Annual Users Meeting**  
MAX-lab, Sweden (8-10 November, 2010)  
Poster Presentation
- 30. 37<sup>th</sup> Stirling Physics Meeting**  
University of Stirling, Stirling, United Kingdom (June 8, 2011)
- 31. UK Semiconductors 2011**  
Endcliffe Village, University of Sheffield, United Kingdom (6-7 July, 2011)  
Poster Presentation
- 32. Summer School on Storage Devices and Ion Traps**  
Göteborg University, Göteborg, Sweden (14-19 June, 2011)
- 33. 40<sup>th</sup> Jaszowiec International School and Conference on the Physics of Semiconductors**  
Krynica-Zdrój, Poland (June 27- July 1, 2011)  
Poster Presentation
- 34. 14<sup>th</sup> International Conference on Applications of Surfaces and Interface Analysis (ECASIA'11)**  
Cardiff, Wales, United Kingdom (4-9 September, 2011)  
Poster Presentation

#### PUBLICATIONS

##### **PUBLISHED IN PEER REVIEWED JOURNALS (International)**

- 1. Formation of epitaxial MnBi layers on (GaMn)As**  
J.Adell, M.Adell, I.Ulfat, J.Sadowski, L.Ilver and J.Kanski  
*Physical Review B* 80, 075204 (2009)
- 2. As3d core level studies of (GaMn)As annealed under As capping**  
I.Ulfat, J.Adell, J.Sadowski, L.Ilver and J.Kanski  
*Surface Science* 604 (2010) 125–128
- 3. Reply to Comment on “As 3d core level studies of (GaMn)As annealed under As capping” by I. Ulfat, J. Adell, J. Sadowski, L. Ilver, J. Kanski, [Surface Science 604 (2010), 125] by P. Jiříček, M. Cukr, I. Bartoš**  
I. Ulfat, J. Adell, J. Sadowski, L. Ilver and J. Kanski  
*Surface Science* 604 (2010) 2065
- 4. Resonant photoemission spectroscopy studies of the magnetic phase transitions in Pr<sub>0.5</sub>Sr<sub>0.5</sub>MnO<sub>3</sub>**  
P. Pal, M.K. Dalai B.R. Sekhar, I. Ulfat, M. Merz f, P. Nagel and S. Schuppler  
*Physica B* 406 (2011) 3519–3523
- 5. Pseudogap behavior in Pr<sub>0.5</sub>Sr<sub>0.5</sub>MnO<sub>3</sub>: A photoemission study**  
P. Pal, M.K. Dalai and I. Ulfat  
*Surface Science* 605 (2011) 875–877
- 6. Electron spectroscopic studies of (GaMn)As nanowires on GaAs (111) B**  
J. Adell, I. Ulfat, J. Sadowski, L. Ilver and J.Kanski  
*Solid State Communications* 151 (2011) 850-854
- 7. Thermal diffusion of Mn through GaAs overlayers on (Ga, Mn)As**  
J. Adell, I. Ulfat, L. Ilver, J. Sadowski, K. Karlsson and J. Kanski  
*J. Phys.: Condens. Matter* 23, 085003 (2011)
- 8. Electron spectroscopic studies of homogenous (GaMn)As layers**  
I. Ulfat, J. Adell, P. Pal, J. Sadowski, L. Ilver and J.Kanski  
*Adv. Mat. Res. Vols. 463-464 (2012) pp 380-384*

**PUBLISHED IN PEER REVIEWED PROCEEDINGS (International)**

**9. Designing the advanced level physics laboratory exercise- some comments**

I.Ulfat

Proceedings of the conference “Physics Teaching in Engineering Education” (PTEE-2009) held at the Institute of Physics, Wroclaw University of Technology, Wroclaw, Poland, September 10-12, 2009 (ISBN: 978-83-929400-0-5)

**10. Motivation at university level - an insight based on interactions between the building blocks**

I.Ulfat, M. Berghof, J. Schwenke and E. Ataman

Proceedings of the “6th International Conference on New Horizons in Industry, Business and Education” (NHIBE-2009) held at Santorini Island, Greece, August 27-28, 2009 (ISBN: 978-960-88785-8-7)

**PUBLISHED IN PEER REVIEWED JOURNALS (National)**

**11. Empirical models for the correlation of monthly average daily global solar radiation with hours of sunshine on a horizontal surface at Karachi, Pakistan**

F.Ahmed and I.Ulfat

*Turkish Journal of Physics*, 28 (2004)

**12. Studies of trends and behavior of climatological parameters for Karachi, Pakistan**

F. Ahmed, M.W.Akhter, A. A. Qidwai and I. Ulfat

*Karachi University Journal of Science*, 32 (2004)

**13. Determination of Angstrom coefficients for the prediction of monthly average daily global solar radiation of sunshine on horizontal surface at Karachi, Pakistan**

I.Ulfat, F. Ahmed and I.A.Siddiqui

*Karachi University Journal of Science*, 33 (2005)

**14. Recital of some existing sunshine-based models of global solar radiation for selected stations of Punjab, Pakistan: A comparative study**

I. Ulfat, F. Ahmed, F. Javed, A. Usman and F. Kanwal

*Karachi University Journal of Science*, 36 (2008)

**15. Correlation of monthly average daily global solar radiation with cloudiness for Karachi, Pakistan**

I. Ulfat, Zaheeruddin, F. A. Abbasi, A. Usman, F. Javed, M. Jahangir, R. ur-Rehman and Firoz Ahmed

*Karachi University Journal of Science*, 38 (2010)

**IN PROCESS**

**16. Existence of a narrow band above the VBM of GaAs for (Ga,Mn)As**

I. Ulfat, J. Sadowski, L. Ilver and J.Kanski

*Submitted for publication in Nature Materials*

**17. New interpretation of valence band photoemission from (Ga,Mn)As**

I. Ulfat, L. Ilver, K. Karlsson, A. Ernst, L. Sandratskii and J. Kanski,

*Submitted for publication in Phys. Rev. Lett.*

**18. Ga3d emission from (GaMn)As**

I. Ulfat, J. Sadowski, L. Ilver and J.Kanski

*Submitted for publication in Phys. Rev. B.*

**19. Prediction of  $\omega_{\infty e}$  from a four-parameter potential function of diatomic molecules**

Zaheeruddin, I. Ulfat, and K. A. Siddiqui

*Submitted for publication in Karachi University Journal of Science*