FACULTY PROFILE

1. Name of the Faculty Member: DR. ARIJIT DE

2. Designation with Category (Substantive/SACT): Associate Professor

3. Department: Chemistry

4. Educational and Professional Qualifications:

Name of the Institution	Name of the Affiliating Body	Degree/Diploma/Certificate Obtained	Specialization (if any)
Central Glass and Ceramic Research Institute, Kolkata	Jadavpur University	Doctor of Philosophy	Material Science
Rajabazar Science College, Kolkata	University of Calcutta	M.Sc	Physical Chemistry

5. Teaching Experience (If applicable):

Name of the Institution	Position Held	From	To
Gokhale Memorial Girls' College, Kolkata	Associate Professor	01.07.2019	Till date
Krishnath Collge, Berhampore	Associate Professor, Assistant Professor, Lecturer	02.01.2003	30.06.2019

6. Research Experience (If applicable):

Name of the Institution	Nature of Work	Designation	From	To
Krishnath College	A minor research project on "Study of sol-gel derived novel ternary TCO nano-powders" with the financial assistance of University Grants Commission (UGC), India.	Principal Investigator	2015	2017
Central Glass and Ceramic Research Institute, Kolkata	"Development of low emissivity coatings on different types of substrates by sol-gel processing" - an Indo-German collaborative	Research Fellow (Full time) Research Fellow (part time)	2000 2003	2002 2006

	project with Bavarian Centre for Applied Energy Research, Germany and Central Glass and Ceramic Research Institute, Kolkata			

7. Areas of Interest (Intra-disciplinary and/or Inter-disciplinary): Sol-gel derived TCO (transparent conducting oxide) thin films and powders.

8. Research Projects (if any):

Completed two years' minor research project (F. No. PSW-096/14-15(ERO) Dt. 03.02.2015) as Principal Investigator on "Study of sol-gel derived novel ternary TCO nano-powders" with financial assistance from University Grants Commission, India.

9. Research Publications (if any):

a) Books/Book Chapters:

A brief overview of Transparent Conducting Oxide (TCO) thin films on glass and their sol-gel fabrication, LAP LAMBERT Academic publishing, 2018 (ISBN : 978-613-6-84810-5)

b) Journal Articles:

1. Dielectric Properties of Gel-Calcined Cd-Zn Oxide Nanocomposites

   A De, S Kundu, Journal of Ceramic Science and Technology 8 (4), 463-469, 2017

2. Enhanced ethanol sensing performance of gel calcined Cd–Sn oxide nanocomposites

   A De, G Antony, S Kundu, Journal of Materials Science: Materials in Electronics 28 (2), 1555-1561, 2017

3. Synthesis and Study of Gel Calcined Cd-Sn Oxide Nanocomposites

   A De, S Kundu, Journal of Materials Engineering and Performance 25 (7), 2746-2751, 2016

4. Effects of barrier layer on electrical property of spin coated Sn – Sb oxide films on glass

   Arijit De, Journal of Surface Science and Technology, 31(3-4), 170-175, 2015

5. Study of Sol-Gel Derived Spin Coated Cd–Sn Oxide Films on Glass

   A De, International Journal of Thin Film Science and Technology 4 (2), 4, 2015

6. Opto-electrical study of sol-gel derived antimony doped tin oxide films on glass
   Arijit De, Transactions on Electrical and Electronic Materials, 16(1), 5-9, 2015

7. Effect of annealing parameters on thermal emissivity of sol-gel derived ITO films,
   Arijit De, Materials Science : An Indian Journal, 12(9), 320 -325, 2015

8. Study of spin coated high antimony content Sn–Sb oxide films on silica glass
   LK Dua, A De, S Chakraborty, PK Biswas, Materials Characterization 59 (5), 578-586, 2008

9. Study of annealing time on sol–gel indium tin oxide films on glass

   A De, PK Biswas, J Manara, Materials characterization 58 (7), 629-636, 2007

10. Aquo-organic sol-based F-doped SnO_2(Sn : F = 90 : 10) coatings on glass

    P. K. BISWAS, L. DUA, A. DE, T. CHAUDHURI, Materials science-Poland, 24(2/1),367-374, 2006

11. Work function of sol–gel indium tin oxide (ITO) films on glass

    PK Biswas, A De, LK Dua, L Chkoda, Applied Surface Science 253 (4), 1953-1959, 2006

12. Surface characterization of sol-gel derived indium tin oxide films on glass

    PK Biswas, A De, LK Dua, L Chkoda, Bulletin of Materials Science 29 (3), 323-330, 2006

13. Study of sol–gel-derived high tin content indium tin oxide (ITO) films on silica-coated soda lime silica glass

    PK Biswas, A De, K Ortner, S Korder, Materials Letters 58 (10), 1540-1545, 2004

14. Effects of tin on IR reflectivity, thermal emissivity, Hall mobility and plasma wavelength of sol–gel indium tin oxide films on glass

    PK Biswas, A De, NC Pramanik, PK Chakraborty, K Ortner, V Hock, S. Korder, Materials letters 57 (15), 2326-2332, 2003

15. Development of sol-gel fluorine doped tin oxide film on glass

    T Chaudhuri, A De, PK Biswas, Transactions of the Indian Ceramic Society 62 (4), 208-212, 2003

c) Course Materials:

Practical tutorial videos-

1. Determination of pH of unknown solution by colour matching method
Link: https://www.youtube.com/watch?v=7mPAUx4q7jM&t=32s

2. Phenol Water Phase Diagram
Link: https://www.youtube.com/watch?v=sHM_iD5m-TU&t=6s

3. Surface tension measurement with Stalagmometer
Link: https://www.youtube.com/watch?v=XNxnANkYlrw&t=112s

4. Viscosity coefficient measurement with Ostwald's viscometer
Link: https://www.youtube.com/watch?v=cUsmOq8F03c&t=403s

5. Lambert Beer's Law
Link: https://www.youtube.com/watch?v=7gk-MPyPRi8&t=1057s

d) Seminar/Conference Proceedings:

(i) TCO-An Essential Material for Fabrication of Solar Cell, **Arijit De**, National Seminar on Environmental Hazards, acb publications Dumkal College, West Bengal, India, 2013, Editors: Swati Mollah, Sandip Kumar Rajak (page No. 14-21).

(ii) Microstructure and scattering behaviour of non-aqueous precursor based dip coated F-doped SnO_2 (Sn : F = 97: 3) coatings on glass, P. K. Biswas, T. Chaudhuri, **A. De**, S. Korder, J. Manara, D. Kraus, 5th International Conference on Coatings on Glass (Vth ICCG), Leibniz-Institut fur Neue Materialien – INM, Saarbruecken, Germany, 2004, Editors: J. Puetz, A. Kurz, M. A. Aegerter (page No. 491 -499)

(iii) Aquo-organic precursor sol based F –doped SnO_2 (Sn : F = 90 : 10) coatings on glass, P. K. Biswas,T. Chaudhuri, **A. De**, 5th International Conference on Coatings on Glass (Vth ICCG), Leibniz-Institut fur Neue Materialien – INM, Saarbruecken, Germany, 2004, Editors: J. Puetz, A. Kurz, M. A. Aegerter (page No. 629 - 635)

(iv) Ultraviolet photoelectron spectroscopic (UPS) study of sol-gel indium tin oxide (ITO) films on bare and silica coated soda lime silica glass, P. K. Biswas, **A. De**, L. Chkoda, 5th International Conference on Coatings on Glass (Vth ICCG), Leibniz-Institut fur Neue Materialien – INM, Saarbruecken, Germany, 2004, Editors: J. Puetz, A. Kurz, M. A. Aegerter (page No. 637 - 644).

(v) Surface analysis of sol-gel indium tin oxide films on glass by XPS, P. K. Biswas, **A. De,** 4th International Conference on Coatings on Glass, (IV th ICCG), Fraunhofer-Institut fur Schicht-und Oberflachentechnik IST, Braunschweig, Germany, 2002, Editors: C.-P. Klages, H. J. Glaser, M. A. Aegerter (Page No. 241-253).

(vi) Optical, electrical and emissivity properties of sol-gel ITO films on glass, P. K. Biswas, **A. De** , P. K. Chakraborty, N. C. Pramanik , K. Ortner, C. R. Becker, V. Hock, S. Korder, J. Fricke, 11th International Workshop on Glasses, Ceramics, Hybrids and Nanocomposites from Gels , University of Padova, Italy, 2001, Editor: Massimo Guglielmi (page No. 84)

10. Invited Talk/Special Lecture/Seminar/Conference Presentation:

(i) A comparative study of calculated and experimental reflectance properties of sol-gel derived ITO thin films on glass, National Seminar on Emerging Advances in Mathematics and Their Applications in Natural Sciences, Dept. of Mathematics, Sripat Singh College, Jianganj, Murshidabad, 2016.

(ii) Sol-Gel synthesis and characterization of CdO-SnO_2 nano-powder, National Seminar on Recent Advances in Chemistry, UGC-Sripat Singh College, Jianganj, Murshidabad, 2015

(iii) Smart Windows and Environment, Seminar on Role of IQAC in Fostering Environmental Consciousness, IQAC, K.N. College, 2015.

(iv) Ground Water Contaminations and Sustainable Managements, International Seminar on Groundwater: Issues and Challenges of the 21st Century, PHED & DST, GOWBSERB DST, GOI, Sripat Singh College, Jianganj, Murshidabad, 2014.

(v) Sol – Gel Derived Antimony-Doped Tin Oxide Thin Film on Glass, National Seminar on Current trends in Chemistry, UGC-Sripat Singh College, Jianganj, Murshidabad, 2013.

(vi) Sol – Gel Derived Heat Reflecting (low emissivity) TCO Thin Films, National Seminar on "Advanced Functional Materials (NSAFM - 2013), CSIR- Central Mechanical Engineering Research Institute, Durgapur, 2013.
(vii) TCO-An Essential Material for Fabrication of Solar Cell, National seminar on environmental hazards, UGC-Dumkal College, Basantapur, Dumkal, Murshidabad, W.B,2012.

(viii) Improvement of electrical properties of Sn - Sb oxide films by using barrier layer , National Seminar on Current trends in Chemistry, UGC-Union Christian Training College, Berhampore, Murshidabad, W.B, 2012

11. Other Academic/Official Responsibilities (At College/University Level or for Any Other Body of Higher Education):

(i) H.O.D (Dept. of Chemistry), Krishnath College

(ii) Covenor, Admission Committee, Krishnath College

(iii) Coordinator, IQAC, Krishnath College

(iv) Convenor, Cultural sub-committee, Krishnath College

(v) Member, Academic sub-committee, Krishnath College

(vi) Member, RUSA e-tendering and purchase committee, Gokhale Memorial Girls' College

(vii) Nodal Officer, Banglar Uchchashiksha, Gokhale Memorial Girls' College

(viii) Member, Admission Committee, Gokhale Memorial Girls' College

(ix) Member, IQAC, Gokhale Memorial Girls' College

(x) Member, Pay Revision Committe, Gokhale Memorial Girls' College

(xi) Senior Academic and Administrative Officer, IQAC, Hazi A. K. Khan College, Hariharpata, Murshidabad.

12. Awards/Recognitions/Fellowships/Memberships (if any):

NET (2000), GATE (2000)

12. Social Responsibility Initiatives:

NA