

Dr. Tapas Kumar Mandal

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Indian Institute of Technology Roorkee
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Employment & Research Experience

Associate Professor (2019 onwards), Dept. of Chemistry, IIT Roorkee, INDIA
Assistant Professor (2011-2019), Dept. of Chemistry, IIT Roorkee, INDIA
Assistant Professor (2010-2011), Dept. of Chemical Sciences, Sikkim University, Sikkim, INDIA
Post-Doctoral Research Associate (2008-2010), University of Glasgow, Scotland, UK
Post-Doctoral Associate (2006-2008), Rutgers University, New Jersey, USA
Post-Doctoral Researcher (2005-2006), University of New Orleans, Louisiana, USA
Ph. D. (2005), Indian Institute of Science, Bangalore, INDIA



Research Interests

Solid State and Materials Chemistry: Photocatalytic, Energy Storage, Magnetic and Catalytic Materials; Nanomaterials; Hydrogen Energy.

List of Publications

From IIT Roorkee (2011 onwards)

56. Lalit Kumar, Joydeep Datta, Sujan Sen, Partha Pratim Ray and **Tapas Kumar Mandal***, Ambient pressure synthesis and properties of $\text{LaCu}_3\text{Fe}_2\text{TiSbO}_{12}$: New A-site ordered ferrimagnetic quadruple perovskite, *J. Solid State Chem.*, 302, 122433 (2021).
55. Jaideep Malik, Shubham Kumar, Priya Srivastava, Monojit Bag and **Tapas Kumar Mandal***, Cation disorder and octahedral distortion control of internal electric field, band bending and carrier lifetime in Aurivillius perovskite solid-solutions for enhanced photocatalytic activity, *Mater. Adv.*, 2, 4832 (2021).
54. Vandana Meena, Jaideep Malik and **Tapas Kumar Mandal***, Tri- α - PbO_2 -Type Fe-Sb Tungstate by Topotactic Ion Exchange of LiSbWO_6 , *ACS Appl. Electron. Mater.*, 3, 2504 (2021).
53. Kalyan Ghorai, Monotosh Bhattacharjee, Debasish Mandal, Akbar Hossain, Trilochan Bhunia, Mrinmay Das, Partha Pratim Ray, Bibhutibhushan Show, Parthasarathi Bera, **Tapas Kumar Mandal**, Motin Seikh* and Arup Gayen*, Facile synthesis of $\text{CuCr}_2\text{O}_4/\text{BiOBr}$ composite and its photocatalytic activity towards RhB and tetracycline hydrochloride degradation under household visible LED light irradiation, *J. Alloys Compd.*, 867, 157947 (2021).
52. R. V. Lakshmi*, Parthasarathi Bera*, Kamalesh Pal, Vijay Alwera, Arup Gayen, **Tapas Kumar Mandal** and S. T. Aruna, Effect of cerium oxide nanostructures on CO oxidation, *J. Nanosci. Nanotechnol.*, 21, 1641 (2021).
51. Nishant Gautam, Vijay Alwera, Raees Muhammad, Hari Raj, Megha Goyal, Anjan Sil, Paritosh Mohanty and **Tapas Kumar Mandal***, In-situ-grown hierarchical mesoporous Li_3VO_4 on GO as a viable anode material for Li-ion batteries, *Bull. Mater. Sci.*, 43, 292 (2020).

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50. Kumari Naveen, Nikhil Kumar, Sonia Rani, **Tapas Kumar Mandal**, Anurag Gaur, P. D. Babu, Vasudeva Siruguri, Pradip K. Maji, Sudipta Kanungo and Avijit Kumar Paul*, Investigation of multiferroic behaviour at room temperature in Bi-induced orthoferrite: combined experimental and first principles studies, *Bull. Mater. Sci.*, 43, 196, (2020).
49. Vijay Alwera, Seema Singh, Vimal C. Srivastava* and **Tapas K. Mandal***, Manganese Trioxide with Various Morphologies: Applications in Catalytic Dye Degradation, *ChemistrySelect*, 5, 4674 (2020).
48. Kamalesh Pal, Arka Dey, Rajkumar Jana, Partha P. Ray, Parthasarathi Bera, Lalit Kumar, **Tapas Kumar Mandal**, Paritosh Mohanty, Md. Motin Sheikh* and Arup Gayen*, Citrate combustion synthesized Al-doped $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ quadruple perovskite: Synthesis, characterization and multifunctional properties, *Phys. Chem. Chem. Phys.*, 22, 3499 (2020).
47. Divya Gupta, Rohit Chauhan, Navneet Kumar, Vikash Singh, Vimal Chandra Srivastava*, Paritosh Mohanty and **Tapas Kumar Mandal**, Enhancing photocatalytic degradation of quinoline by $\text{ZnO}:\text{TiO}_2$ mixed oxide: optimization of operating parameters and mechanistic study, *J. Environ. Mgmt.*, 258, 110032 (2020).
46. Sonia Rani, Gollapally Naresh and **Tapas Kumar Mandal***, Coupled-substituted double-layer Aurivillius niobates: Structures, magnetism and solar photocatalysis, *Dalton Trans.*, 49, 1433 (2020).
45. Lalit Kumar, Joydeep Datta, Partha Pratim Ray and **Tapas Kumar Mandal***, Composition dependent 3C and 6H perovskites, $\text{A}_3\text{MTiSbO}_9$ (A = Sr, Ba; M = Mn, Co): Structural, magnetic and dielectric properties, *J. Solid State Chem.*, 282, 121116 (2020).
44. Ravikumar K. V. G., H. Kubendiran, K. Ramesh, Sonia Rani, **Tapas Kumar Mandal**, Mrudula Pulimi, C. Natarajan and Amitava Mukherjee*, Batch and column study on tetracycline removal using green synthesized NiFe nanoparticles immobilized alginate beads, *Environ. Technol. & Inno.*, 17, 100520 (2020).
43. Sudiksha Aggrawal, **Tapas Kumar Mandal** and Paritosh Mohanty*, Ag^+ driven antimicrobial activity of $\text{Ag}^+:\text{ZnO}$ nanowires immobilized on paper matrices, *Materialia*, 8, 100490 (2019).
42. Nishant Gautam, Raeesh Muhammad, Hari Raj, Anjan Sil, Paritosh Mohanty and **Tapas Kumar Mandal***, Multimodal mesopore hierarchy in Li_3VO_4 boosts electrochemical anode performance of lithium-ion batteries, *Microporous Mesoporous Mater.*, 290, 109669 (2019).
41. R. V. Lakshmi, Kamalesh Pal, **Tapas Kumar Mandal** and S. T. Aruna*, Multifunctional properties of ceria nanocubes synthesized by a hydrothermal method, *Bull. Mater. Sci.*, 42, 210 (2019).
40. Uma Dutta, Debamalya Ghosh, Ariful Haque, Lalit Kumar, **Tapas Kumar Mandal**, Pravin S. Walke, Kamalesh Pal, Arup Gayen, Asish K. Kundu and Md. Motin Sheikh*, A revisit to the effect of

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- annealing temperature on magnetic properties of $\text{LaFe}_{0.5}\text{Mn}_{0.5}\text{O}_3$, *J. Phys.: Condens. Matter*, **31**, 225801 (2019).
39. Vandana Meena and **Tapas Kumar Mandal***, Topotactic Ion Exchange in a Three-Dimensional Close-Packed Trirutile Structure with an Octahedral Network, *Inorg. Chem.*, **58**, 2921 (2019).
38. Kumari Naveen, Nikhil Kumar, **Tapas Kumar Mandal**, P. D. Babu, Vasudeva Siruguri, Pradip K. Maji, Avijit Kumar Paul*, Multiferroic behaviour in B-site Cr-doped hexagonal YInO_3 perovskites: Synthesis, structure and properties, *J. Mol. Struct.*, **1158**, 432, (2019).
37. Kumari Naveen, Manfred Reehuis, Peter Adler*, Philip Pattison, Andreas Hoser, **Tapas Kumar Mandal**, U. Arjun, Prashanta K. Mukherjee, Ramesh Nath, Claudia Felser and Avijit Kumar Paul, Reentrant magnetism at the borderline between long-range antiferromagnetic order and spin-glass behavior in the B-site disordered perovskite system $\text{Ca}_{2-x}\text{Sr}_x\text{FeRuO}_6$, *Phys. Rev. B*, **98**, 224423 (2018).
36. Gollapally Naresh, Jaideep Malik, Vandana Meena and **Tapas Kumar Mandal***, pH-Mediated Collective and Selective Solar Photocatalysis by a series of Layered Aurivillius Perovskites, *ACS Omega*, **3**, 11104 (2018).
35. Kamalesh Pal, Kalyan Ghorai, Sudiksha Aggrawal, **Tapas Kumar Mandal**, Paritosh Mohanty, Md Motin Seikh and Arup Gayen*, Remarkable Ti-promotion in vanadium doped anatase titania for methylene blue adsorption in aqueous medium, *J. Env. Chem. Engg.*, **6**, 5212 (2018).
34. Kamalesh Pal, Arka Dey, Partha P. Ray, Natalia E. Mordvinova, Oleg I. Lebedev, **Tapas K. Mandal**, Md Motin Seikh* and Arup Gayen*, Synthesis, Characterization and Catalytic Activity of Quadruple Perovskite: $\text{CaCu}_{3-x}\text{Mn}_x\text{Ti}_{4-x}\text{Mn}_x\text{O}_{12}$ ($x = 0, 0.5$ and 1.0), *ChemistrySelect*, **3**, 1076 (2018).
33. Ambikeshwar Pandey, Gollapally Naresh and **Tapas Kumar Mandal***, Sunlight responsive new Sillén-Aurivillius A1X1 hybrid layered oxyhalides with enhanced photocatalytic activity, *Sol. Energy Mater. Sol. Cells*, **161**, 197 (2017).
32. Seema Singh, Vimal Chandra Srivastava*, Shang Lien Lo, **Tapas Kumar Mandal** and Gollapally Naresh, Morphology-controlled green approach for synthesizing the hierarchical self-assembled 3D porous ZnO superstructure with excellent catalytic activity, *Microporous Mesoporous Mater.*, **239**, 296 (2017).
31. Seema Singh, Vimal Chandra Srivastava*, **Tapas Kumar Mandal**, Indra Deo Mall and Shang Lien Lo, Synthesis and application of green mixed-metal oxide nanocomposites materials from solid waste for dye degradation, *J. Environ. Mgmt.*, **181**, 146 (2016).
30. Tinku Baidya*, Parthasarathi Bera*, Oliver Krocher, Olga Safonova, Paula M. Abdala, Birgit Gerke, Rainer Pöttgen, Kaustubh R. Priolkar and **Tapas Kumar Mandal**, Understanding the anomalous

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- behavior of the Vegard's law in $Ce_{1-x}M_xO_2$ ($M = Sn$ and Ti ; $0 < x \leq 0.5$) solid solutions, *Phys. Chem. Chem. Phys.*, 18, 13974 (2016).
29. Rajib Mistri, Dipak Das, Jordi Llorca, Montserrat Dominguez, **Tapas Kumar Mandal**, Paritosh Mohanty, Bidhan Chandra Ray and Arup Gayen*, Selective liquid phase benzyl alcohol oxidation over Cu-loaded $LaFeO_3$ perovskite, *RSC Adv.*, 6, 4469 (2016).
28. Gollapally Naresh and **Tapas Kumar Mandal***, Efficient COD Removal Coinciding with Dye Decoloration by Five Layer Aurivillius Perovskites under Sunlight Irradiation, *ACS Sustainable Chem. Eng.*, 3, 2900 (2015).
27. Seema Singh, Vimal Chandra Srivastava* and **Tapas Kumar Mandal**, Treatment of Fertilizer Industry Wastewater by Catalytic Per-Oxidation Process using Copper loaded SBA-15, *J. Environ. Sci. Health: Part A*, 50, 1468 (2015).
26. Shweta Garg, Vimal Chandra Srivastava*, Seema Singh and **Tapas Kumar Mandal**, Catalytic Degradation of Pyrrole in Aqueous Solution by Cu/SBA-15, *Int. J. Chem. React. Eng.*, 13, 437 (2015).
25. Gollapally Naresh and **Tapas Kumar Mandal***, Excellent Sun-Light-Driven Photocatalytic Activity by Aurivillius Layered Perovskites, $Bi_{5-x}La_xTi_3FeO_{15}$ ($x = 1, 2$), *ACS Appl. Mater. Interfaces*, 6, 21000 (2014).
24. Seema Singh, Vimal Chandra Srivastava*, **Tapas Kumar Mandal** and Indra Deo Mall, Synthesis of different crystalloraphic Al_2O_3 nanomaterials from solid waste for application in dye degradation, *RSC Adv.*, 4, 50801 (2014).
23. Rajiv Mistri, Sayantani maiti, Jordi Llorca, Montserrat Dominguez, **Tapas Kumar Mandal**, Paritosh Mohanty, Bidhan Chandra Ray and Arup Gayen*, Copper ion substituted hercynite ($Cu_{0.03}Fe_{0.97}Al_2O_4$): A highly active catalyst for liquid phase oxidation of cyclohexane, *Appl. Cat. A: General*, 485, 40 (2014).
22. H. Reardon, J. Hanlon, R. W. Hughes, A. Godula-Jopek, **Tapas K. Mandal** and Duncan H. Gregory*, Emerging concepts in solid-state hydrogen storage; The role of nanomaterials design, *Energy Environ. Sci.*, 5, 5951 (2012).

From Rutgers University, USA & University of Glasgow, UK (2006 -2010)

21. **Tapas K. Mandal** and Duncan H. Gregory*, Hydrogen: Future energy vector for sustainable development, *Proceedings of the Institution of Mechanical Engineers, Part C, J. Mech. Engg. Sci.*, 224(C3), 539 (2010).
20. **Tapas Kumar Mandal**, Mark Croft, Joke Hadermann, Gustaaf Van Tendeloo, Peter W. Stephens and Martha Greenblatt*, La_2MnVO_6 Double Perovskite: A Structural, Magnetic and X-Ray

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- Absorption Investigation, *J. Mater. Chem.*, 19, 4382 (2009).
19. **Tapas K. Mandal** and Duncan H. Gregory*, Hydrogen storage materials: present scenarios and future directions, *Ann. Rep. Sec. A (Inorg. Chem.)*, 105, 21 (2009).
 18. **Tapas Kumar Mandal**, Claudia Felser, Martha Greenblatt and Jürgen Kübler*, Magnetic and electronic properties of double perovskites and estimation of their Curie temperatures by *ab initio* calculations, *Phys. Rev. B*, 78, 134431 (2008).
 17. **Tapas Kumar Mandal**, Artem M. Abakumov, Maxim V. Lobanov, Mark Croft, Viktor V. Poltavets and Martha Greenblatt*, Synthesis, Structure and Magnetic Properties of SrLaMnSbO₆: A New B-site Ordered Double Perovskite, *Chem. Mater.*, 20, 4653 (2008).
 16. **Tapas Kumar Mandal**, Viktor V. Poltavets, Mark Croft and Martha Greenblatt*, Synthesis, Structure and Magnetic Properties of A₂MnB'O₆ (A = Ca, Sr; B' = Sb, Ta) Double Perovskites, *J. Solid State Chem.*, 181, 2325 (2008).
 15. Viktor V. Poltavets, Konstantin A. Lokshin, Mark Croft, **Tapas K. Mandal**, Takeshi Egami and Martha Greenblatt*, Crystal structure of T'-type Ln₄Ni₃O₈ (Ln = La, Nd) nickelates, *Inorg. Chem.*, 46, 10887 (2007).
 14. **Tapas Kumar Mandal**, Artem M. Abakumov, Joke Hadermann, Gustaaf Van Tendeloo, Mark Croft and Martha Greenblatt*, Synthesis, Crystal Structure and Magnetic Properties of Sr_{1.31}Co_{0.63}Mn_{0.37}O₃: A Derivative of the Incommensurate Composite Hexagonal Perovskite Structure, *Chem. Mater.*, 19, 6158 (2007).
 13. Rohini Mani, P. Selvamani, Joby E. Joy, J. Gopalakrishnan* and **Tapas Kumar Mandal**, A Study of Ba₃M^{II}M^{IV}WO₉ (M^{II} = Ca, Zn; M^{IV} = Ti, Zr) Perovskite Oxides: Competition between 3C and 6H Perovskite Structures, *Inorg. Chem.*, 46, 6661 (2007).

From Indian Institute of Science, Bangalore (during PhD, 2000-2005)

12. **Tapas Kumar Mandal** and J. Gopalakrishnan*, New route to ordered double perovskites: Synthesis of rock salt oxides, Li₄MWO₆, and their transformation to Sr₂MWO₆ (M = Mg, Mn, Fe, Ni) via metathesis, *Chem. Mater.*, 17, 2310 (2005).
11. **T. K. Mandal**, T. Sivakumar, S. Augustine and J. Gopalakrishnan*, Heterovalent cation-substituted Aurivillius phases, Bi₂SrNaNb₂TaO₁₂ and Bi₂Sr₂Nb_{3x}M_xO₁₂ (M = Zr, Hf, Fe, Zn), *Materials Science & Engineering: B*, 121, 112 (2005).
10. **Tapas Kumar Mandal**, Saji Augustine, J. Gopalakrishnan* and Ph. Boullay, Bi₄LnNb₃O₁₅ and (Ln = La, Pr, Nd) and Bi₄LaTa₃O₁₅: New intergrowth Aurivillius related phases, *Mater. Res. Bull.*, 40, 920 (2005).
9. **Tapas Kumar Mandal**, L. Sebastian, J. Gopalakrishnan*, L. Abrams and J. B. Goodenough,

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- Hydrogen uptake by barium manganite at atmospheric pressure, *Mater. Res. Bull.*, 39, 2257 (2004).
8. Ramesh Sharma, **T. K. Mandal**, K. Ramesha and J. Gopalakrishnan*, Synthesis and characterization of AgBiO₃ with the cubic KSbO₃ structure, *Ind. J. Chem.*, 43A, 11 (2004).
 7. Y. G. Zhao*, R. Fan, X. P. Zhang, H. Balci, S. B. Ogale, T. Venkatesan, **T. K. Mandal** and J. Gopalakrishnan, Insulator-metal transition and magnetoresistance of oxygen deficient La_{0.35}Ca_{0.65}MnO_y, *J. Magm. Magn. Mater.*, 284, 35 (2004).
 6. **Tapas Kumar Mandal** and J. Gopalakrishnan*, From rocksalt to perovskite: A metathesis route for the synthesis of perovskite oxides of current interest, *J. Mater. Chem.*, 14, 1273 (2004).
 5. Z. Serpil Gönen, **Tapas Kumar Mandal**, J. Gopalakrishnan*, Bryan W. Eichhorn and Richard L. Greene, Novel ABO₃ oxides related to perovskite and YAlO₃ structure types in the La-B-V-O (B = Ni, Cu) systems, *Ind. J. Chem.*, in *Special Issue on Modern Inorganic Chemistry*, 42A, 2228 (2003).
 4. J. Gopalakrishnan, Z. Serpil Gönen, K. -S. Chang, Ichiro Takeuchi, **T. K. Mandal**, Bryan W. Eichhorn*, James C. Fettinger and Richard L. Greene, Synthesis and structure of La₁₄V₆CuO_{36.5}: A transparent Cu(I) vanadate containing [OCuO]³⁻ sticks, *J. Mater. Chem.*, 12, 3839 (2002).
 3. **Tapas Kumar Mandal**, N. Y. Vasanthacharya and J. Gopalakrishnan*, A novel metathesis route for the synthesis of La₂CuO₄ and its superconducting analogues: Synthesis of a new lithium-substituted derivative of La₂CuO₄, *J. Mater. Chem.*, 12, 635 (2002).
 2. Y. G. Zhao*, W. Cai, J. Zhao, X. P. Zhang, R. Fan, B. S. Cao, M. H. Zhu, Tom Wu, S. B. Ogale, S. R. Shinde, T. Venkatesan, Q. Y. Tu, **T. K. Mandal** and J. Gopalakrishnan, Insulator-metal transition and magnetic properties of La_{0.5}Ca_{0.5}MnO_y induced by tuning the oxygen content, *J. Appl. Phys.*, 92, 5391 (2002).
 1. Y. G. Zhao*, W. Cai, J. Zhao, X. P. Zhang, B. S. Cao, M. H. Zhu, L. W. Zhang, S. B. Ogale, Tom Wu, T. Venkatesan, Li Lu, **T. K. Mandal** and J. Gopalakrishnan, Electrical transport and magnetic properties of La_{0.5}Ca_{0.5}MnO_{3-y} with varying oxygen content, *Phys. Rev. B*, 65, 144406 (2002).

Patents

1. Rapid Hydrothermal Synthesis of Hierarchically Mesoporous Li₃VO₄ and its Application as Anode Material in Lithium Ion Batteries, (Inventors: Nishnat Gautam, Paritosh Mohanty, Anjan Sil and **Tapas Kumar Mandal***), Indian Patent, Application No. **201711038135**; Filing Date 27.10.2017.
2. A Method of Synthesis of Lithium Vanadate on Graphene Oxide, (Inventors: Nishant Gautam and **Tapas Kumar Mandal***), Indian Patent, PPA No. **201811022066**; Filing Date 13.06.2018.

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Books / Book-Chapters

1. **Tapas Kumar Mandal** and Martha Greenblatt, *Transition Metal Oxides: Magnetoresistance and Half-metallicity*, in Contemporary Inorganic Materials, (eds. D. W. Bruce, D. O'Hare and R. I. Walton), Volume 2: Functional Oxides, John Wiley & Sons, 2010.

Conference/Symposium/Meeting/Workshop

33. International Conference on Recent Developments in Organic and Applied Chemistry-2020 (RDOAC-2020, A virtual meeting), organized by Department of Chemistry, SAS, KIIT, Deemed to be University, Bhubaneswar, India, July 6-7 (2020) **Tapas Kumar Mandal**, Invited Lecture: *Perspectives on Layered Perovskites in Solar Photocatalysis*.
32. 2nd Indian Materials Conclave (MRSI), organized by CSIR-CGCRI (Central Glass and Ceramic Research Institute), Kolkata, India, February 11 - 14 (2020), Shubham Kumar, Jaideep Malik and **Tapas Kumar Mandal**, Poster Title: *Rhodamine B Dye-Sensitized Photocatalytic Degradation of BPA by Alkaline Earth Metal and Iron Co-substituted Niobates*.
31. 2nd Indian Materials Conclave (MRSI), organized by CSIR-CGCRI (Central Glass and Ceramic Research Institute), Kolkata, India, February 11 - 14 (2020), Jaideep Malik and **Tapas Kumar Mandal**, Poster Title: *Collective Degradation of Rhodamine B and Tetracycline by New Transition Metal Incorporated Aurivillius Perovskites, $Bi_{2.5}Sr_{1.5}Nb_2Ti_{0.5}Mo_{0.5}O_{12}$ (M = Cr, Mn and Fe)*.
30. 47th IUPAC World Chemistry Congress, Le Palais des Congrès de Paris, France, July 5 – 12, (2019), Vandana Meena and **Tapas Kumar Mandal**, Poster Title: *$Li_{0.08}Fe_{0.46}SbWO_6$: A New tri- α - PbO_2 Type Fe-Sb-Tungstate by Topotactic Ion Exchange of $LiSbWO_6$* .
29. International Conference on Structural and Inorganic Chemistry-II (ICSIC-II), IISER Pune, March 18-19 (2019). G. Naresh, J. Malik and **T. K. Mandal**, Invited Talk: *Layered Perovskites in Solar Photocatalysis: A Structural Perspective*.
28. First Indian Materials Conclave & 30th AGM of MRSI, Indian Institute of Science, Bangalore, February 12-15 (2019). Lalit Kumar and **Tapas Kumar Mandal**, Talk: *Crystal Structure and Magnetic Properties of $LnCu_3MnTi_3O_{12}$ (Ln = La, Nd) Quadruple Perovskites*.
27. 23rd CRSI National Symposium in Chemistry, Indian Institute of Science Education & Research Bhopal, Bhopal, July 13-15 (2018). Vandana Meena and **Tapas Kumar Mandal**; Poster: *Topotactic Transformation of Non-Magnetic Layered Titanates into Magnetic Titanates through Soft-Chemistry*.
26. 23rd CRSI National Symposium in Chemistry, Indian Institute of Science Education & Research Bhopal, Bhopal, July 13-15 (2018). Jaideep Malik, Gollapally Naresh, Vandana Meena and **Tapas Kumar Mandal**; Poster: *Collective and Selective Solar Photocatalysis by $Bi_5ATi_4FeO_{18}$ (A = Ca, Sr*

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- and Pb) Aurivillius Perovskites.
25. 2nd Shaping the Energy Future: Challenges and Opportunities (SEFCO-2018), Indian Institute of Petroleum, Dehradun, May 11-12 (2018). Sonia Rani and **Tapas Kumar Mandal**; Poster: *Transition Metal Incorporated New Sillén-Aurivillius A1X1 Layered Tungstates: Magnetism and Solar Photocatalysis*.
 24. Multifunctional Materials: Analytical Techniques and Diverse Applications (MMAD18), NIT Kurukshetra, January 20 (2018). Expert talk: *New Oxides for Solar Photocatalysis and Energy Storage*.
 23. Multifunctional Materials: Analytical Techniques and Diverse Applications (MMAD18), NIT Kurukshetra, January 20 (2018). Nishant Gautam, Prashanth Sandineni, Amitava Choudhury and **Tapas Kumar Mandal**; Poster: *A new synthetic route for Na₃Fe(PO₄)₂ layered phosphate: A potential cathode material for sodium and lithium ion batteries*.
 22. Modern Trends in Inorganic Chemistry-XVII, National Chemical Laboratory (NCL) & Indian Institute of Science Education and Research (IISER), Pune, December 11-14 (2017). Jaideep Malik and **Tapas Kumar Mandal**; Poster: *Effect of Iron Substitution on Photocatalytic Activity of New Five Layered Aurivillius Perovskites*.
 21. Modern Trends in Inorganic Chemistry-XVII, National Chemical Laboratory (NCL) & Indian Institute of Science Education and Research (IISER), Pune, December 11-14 (2017). Vandana Meena and **Tapas Kumar Mandal**; Poster: *Li_{1-x}Fe_xNbWO₆: A Novel Layered Trirutile Oxide obtained by Topotactic Ion-Exchange and its Magnetic Properties*.
 20. 21st CRSI National Symposium in Chemistry, Indian Institute of Chemical Technology, Hyderabad, July 14-16, (2017). Vijay Alwera and **Tapas Kumar Mandal**; Poster: *Manganese Oxides with various Morphologies: Applications in Catalytic Dye Removal*.
 19. 21st CRSI National Symposium in Chemistry, Indian Institute of Chemical Technology, Hyderabad, July 14-16, (2017). Lalit Kumar and **Tapas Kumar Mandal**; Poster: *A₃MTiSbO₉ (A = Sr, Ba; M = Mn, Co): Composition Dependent New 3C and 6H Perovskite Phases and Their Magnetic Properties*.
 18. 10th National Conference on Solid State Chemistry and Allied Areas (ISCAS-2017), Delhi Technological University, Delhi, July 1-3, (2017). Sonia Rani and **Tapas Kumar Mandal**; Oral presentation: *Transition Metal Incorporated Two Layer Aurivillius Niobates: Magnetism and Solar Photocatalysis*.
 17. Discussion Meeting on 'NMR Meets Materials', TCIS-TIFR, Hyderabad, May 5-6 (2017). Title of Talk: *Layered Titanates, Vanadates and Phosphates: Applications in Photocatalysis and Energy Storage*.
 16. International Symposium on Solid State Chemistry, JNCASR, Bangalore, December 1-3 (2016).

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15. 18th CRSI National Symposium in Chemistry, Punjab University & INST, Mohali February 5-7, (2016). Nishant Gautam, Hariraj, Anjan Sil and **Tapas Kumar Mandal**; Poster: *Novel Olivine type LiMnPO₄: Potential cathode materials for high voltage Li-ion battery.*
14. Modern Trends in Inorganic Chemistry-XVI, Jadavpur University, December 3-5 (2015). Gollapally Naresh and **Tapas Kumar Mandal**; Poster: *Sunlight-driven Selective Dye Degradation over New Sillen-Aurivillius Layered Perovskites.*
13. International Conference on Emerging Materials and Applications (ICEMA'14), IIT Roorkee, Saharanpur Campus, April 5-6 (2014). Kamini Gupta, Gollapally Naresh and **Tapas Kumar Mandal**; Poster: *Novel perovskites in the Pb-La-Ti-Fe-O system: Synthesis, characterization and visible-light photocatalysis.*
12. Modern Trends in Inorganic Chemistry-XV, IIT Roorkee, December 13-16 (2013). Gollapally Naresh and **Tapas Kumar Mandal**; Poster: *Novel transition metal incorporated Aurivillius phases Bi_{5-x}La_xTi₃FeO₁₅ (x = 0 - 2) as visible light photocatalysts.*
11. National Magnetic Resonance Society Symposium 2013 (NMRS 2013), IIT Bombay, February 3-6 (2013). Nishant Gautam, **Tapas Kumar Mandal**, Elumalai Viswanathan and Subramanian Ganapathy; Title of talk: *Synthesis, characterization and solid state NMR studies of two and three-dimensional lithium lanthanum/calcium titanates.*
10. 49th Annual Convention of Chemists 2012 (organized by Indian Chemical Society), Dept. of Applied Sciences, NITTR, Bhopal, December 12-15 (2012). Rajiv Mistri, Sayantani Maiti, Jordi Llorca, **Tapas Kumar Mandal**, Bidhan Chandra Ray and Arup Gayen; Poster: *Selective oxidation of cyclohexane with hydrogen peroxide in presence of copper ion substituted spinel oxide substituted catalysts Cu_xM_{1-x}Al₂O₄ (x=0-0.07; M = Mg, Mn, Fe, Ni, Zn).*
9. Modern Trends in Inorganic Chemistry-XIV, University of Hyderabad, December 10-13 (2011). **Tapas Kumar Mandal**, Mark Croft and Martha Greenblatt; Poster: *Double Perovskites as Exotic Magnetic Materials: Synthesis of La₂MnVO₆ and Future Challenges.*
8. Scottish Hydrogen and Fuel Cell Association Membership Meeting, University of St. Andrews, St. Andrews, UK, February 17 (2010). **Tapas Kumar Mandal**; Title of talk: *Solid-state hydrogen storage: the state of the art and potential solutions.*
7. ISIS Crystallography User Group Meeting, Abingdon, UK, November 5-6 (2009). **Tapas K. Mandal** and Duncan H. Gregory; Poster: *Hydrogen storage in the 1:1 LiNH₂-MgH₂ system: An X-ray diffraction investigation.*
6. 42nd IUPAC World Chemistry Congress, SECC, Glasgow, UK, August 2-7 (2009).
5. Universities of Scotland Inorganic Conference (USIC), University of Strathclyde, Glasgow, UK,

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- September 11-12 (2008).
4. 22nd Annual Symposium of the Laboratory for Surface Modification, Rutgers University, Piscataway, New Jersey, USA, February 15 (2008). **Tapas K. Mandal**, Viktor V. Poltavets, Mark Croft and Martha Greenblatt; Poster: *Synthesis and manipulation of low-dimensional transition metal oxides towards realization of novel electronic properties*.
 3. Materials Research Society Symposium Proceedings Series, Volume 988E, November 28-30 (2006). Elisha Josepha, **Tapas Mandal** and John B. Wiley; Poster QQ9.19: *The Synthesis and Characterization of CsAeBiO₂Cl₂ (Ae = Ca, Sr, Ba)*.
 2. SSCU Silver Jubilee International Symposium on Solid State and Materials Chemistry, Indian Institute of Science, Bangalore, India, December 4–7 (2001).
 1. *Winter School in Solid State and Materials Chemistry*, Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore, India, 29 November 29 – December 4 (1999).