**RESEARCH INTERESTS:**

**materials & Applications**

* Advancements in the synthesis of various nanomaterials, including 2D materials, metal, metal oxide and mixed metal oxides nanoparticles
* Synthesis of nanomaterials using green technologies
* Graphene and Graphene nanocomposites based 2D materials for heterogeneous catalysis.
* Applications of metal oxides and mixed metal oxides nanoparticles as heterogeneous catalysts
* Biological Applications of Nanomaterials
* Energy storage applications of Nanomaterials
* Environmental applications of Nanomaterials

**INTERNATIONAL COLLABORATIONS:**

* Prof. W. Tremel’s group at Max Planck Institute for Polymer Research, Postfach 3148, D-55021 Mainz, Germany
* Prof. Luis Marzan’s Highly cited Professor at Bionanoplasmonics Laboratory, CIC biomaGUNE, Paseo de Miramon 182, 20009 Donostia – San Sebastian, Spain
* Prof. Ahmed Kamal winner of “Most Outstanding Researcher award in India”, Pro-VC at Jamia Hamdard University, Hamdard Nagar, tughlakabad institutional area New Delhi - 110062 Delhi NCR, India
* Dr. Shams Tabrez, Associate Professor, Aligarh Muslim University, ALIGARH, UTTAR PRADESH (UP), India (IN), Pin Code:- 202002
* Dr. Muhammad Bilal, Associate Professor, School of Life Sciences and Food Engineering, Huaiyin Institute of Technology, Huaian, 223003, China.

**LOCAL COLLABORATIONS:**

* Extensive collaboration with several research groups within the department.
* Faculty at Department of Chemical Engineering, King Saud University.
* Faculty at Department of Pharmacy, King Saud University.
* Scientists at King Fahad University of Petroleum and Minerals, Dhahran.

**RESEARCH PROJECTS AND FUNDINGS:**

1. Principal Investigator of a project from the Ministry of Education **(IFKSUDR\_E120)** “Heteroatom Doped Graphene and Metal Nanoparticles Based Electrocatalysts for the Sustainable Production of Hydrogen Through Water Splitting” 2023.
2. CO-Principal investigator of **various** minor project funded by Deanship of Research (KSU), Faculty of Science, KSU dealing with nanomaterials and their applications.
3. CO-Principal investigator of major project (2 years) funded by SABIC concerning P-Xylene Liquid-Phase Catalytic Oxidation to Terephthalic Acid Using Co-Catalysts. Nearly 2 million Saudi Riyals
4. CO-Principal investigator of a project from NSTIP (The National Plan for Science,Technology and Innovation at King Saud University). “Graphene-Nanoparticle-Based Nanocatalysts for the Catalytic Oxidation of Alcohols. Nearly 2 million Saudi Riyals
5. CO-Principal investigator of a project from NSTIP (The National Plan for Science,Technology and Innovation at King Saud University). “green nanotechnology in catalysis: plant extract mediated synthesis of nanoparticles and their catalytic applications. Nearly 2 million Saudi Riyals
6. CO-Principal investigator of a project from NSTIP (The National Plan for Science,Technology and Innovation at King Saud University). “Screening and activity-guided isolation of anticancer and antimicrobial agents from the plants of Saudi Arabian deserts”. Nearly 2 million Saudi Riyals
7. CO-Principal investigator of a project from Ministry of Education (3 years project) “Development of bio-polyesters and their graphene-based nanocomposites from renewable resources”. Nearly, 1.8 million Saudi Riyals.
8. CO-Principal investigator of a project from Ministry of Education (3 years project). “Towards the Quest of Novel Bioactive Compounds: Non-conventional Isolation of Novel Actinomycetes and Metal Nanoparticles Mediated Stress For The Expression of Their Cryptic Biosynthetic Genes”. Nearly, 1.8 million Saudi Riyals.

**PERSONAL INFORMATION:**

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| **Nationality:** | Indian, Male |  |
| **Birth date:** | 24th March, 1979 |
| **Mobile:**  **Address:** | +966 500378745 **Office:** +966 1 4675985  King Saud University, College of Science  Department of Chemistry  P. O. Box 2455, Riyadh 11451 (KSA) |
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***SUMMARY:***

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| **March-2023-Till Date**  **February 2018-**  **March 2023**  **Other Responsibilities**  **March 2011-January 2018**  **Teaching Experience**  **November 2008-February 2011** | **Professor, Department of Chemistry, King Saud University, Riyadh, Kingdom of Saudi Arabia.**  (Involve in Teaching, Research and Departmental Administrative Activities)  **Associate Professor, Department of Chemistry, King Saud University, Riyadh, Kingdom of Saudi Arabia.**  (Involved in Teaching, Research and Departmental Administrative Activities)  **Associate Editor of the Arabian Journal of Chemistry**  **Assistant Professor, Department of Chemistry, King Saud University, Riyadh, Kingdom of Saudi Arabia.**  Professor at chemistry department with excellent communication skills demonstrated by 7 years of teaching experience. Highly motivated and capable of fostering a cohesive student learning atmosphere. Highly competent in delivering excellent curriculum management and experienced in handling students of varying backgrounds. Possess vast experience in teaching both undergraduate and graduate level courses in chemistry including CHEM 101 and 103, and also supervised several MSc and PhD students. Besides,   * Participated in various departmental, campus and college level programs, activities and committees * Monitored student progress and provided feedback for improvements. * Assisted in student registration, advisement and placement activities. * Provided support in department planning activities. * Attend professional developmental seminars. * Performed various other duties assigned by the department head   Worked as a Post-Doctoral research fellow in the field of ***NMR* *and******solid-sate chemistry of drugs at the*** Max Planck Institute of Polymer Research, Mainz, Germany |
| **August 2005 to**  **October 2008** | ***Around 3*** years of lab experience as a PhD fellow in the field of ***material science and crystal engineering*** |
| **July 2004 to**  **July 2005** | ***1 year*** of lab experience as a fellow researcher in the field of ***Crystal engineering and*** ***crystallization of polymers*** |
| ***EDUCATION:***  **August 2005 to**  **October 2008**  **July 2002 to**  **March 2005**  **July 1997 to**  **april 2000**  ***SKILLS:***  **LANGUAGES**  **KNOWN** | **Degree: Ph. D in Chemistry**  **Under the guidance of Prof. Dr. Hans Wolfgang Spiess at**  **Max Planck Institute for Polymer Research, Mainz, Germany**  Topic: “Structural Transformation Related to Organic Solid-State Reactions: Correlation Studies of Solid-state NMR and X-ray Analysis”.  Degree Conferred By: Johannes Gutenberg University of Mainz, Germany.  **Degree: Masters in Material Science**  Majors: Organic solid-state chemistry, Polymers, Material Chemistry.  JOHANNES GUTENBERG UNIVERSITY OF MAINZ  Mainz, Germany.  **Degree: Bachelors in CHEMISTRY**  Osmania University, Hyderabad, India  Chemistry, Microbiology, and Zoology  English, **Urdu**, Hindi, German, Arabic  (Studied Urdu as a second language until higher secondary level) |
| **TECHNICAL SKILLS**  **COMPUTER SKILLS**  **STRENGHT** | *CHROMATOGRAPHIC TECHNIQUES:* **Column chromatography**, **GPC** (Gel Permeation Chromatography), **HPLC** (High Performance Liquid Chromatography).  *SPECTROSCOPIC TECHNIQUES:* **NMR** (Nuclear Magnetic Resonance specially solid-state), **UV/VIS** (Absorption spectroscopy), **FT-IR** (Infrared spectroscopy) and **RAMAN**, **Fluorescence** spectroscopy  *MICROSCOPIC TECHNIQUES:* **AFM** (Atomic Force Microscopy) **SEM**(Scanning Electron Microscopy), TEM (Transmission Electron Microscopy), Optical Microscopy.  *DIFRACTION TECHNIQUES:* **Single Crystal** X-Ray Analysis and **Powder** Diffraction.  *THERMAL ANALYSIS:* **DSC** (Differential scanning calorimetry), **TGA** (Thermogravimetric Analysis)  MS- OFFICE XP, ORIGIN, CORAL DRAW, CHEM DRAW,  C++, SYBASE, JAVA, END NOTE, SCI-FINDER.   * Excellent interpersonal and communication skills * Excellent ability to interact with people and work in a team * Confident, Hardworking and Optimistic |

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| **LIST OF PUBLICATIONS** (Total **160** including published and under process, H-index: **37**, Citations: **~5600**):  1. **M. Khan**, G. Brunklaus, V. Enkelmann, H. W. Spies, *J. Am. Chem. Soc.,* **2008**, 130, 1741-1748. Transient States in [2 + 2] Photodimerization of Cinnamic Acid: Correlation of Solid-State NMR and X-ray Analysis.  2. **M. Khan**, V. Enkelmann, G. Brunklaus . *J. Org. Chem*., (featured article) **2009**, 74(6), 2261-2270. SS-NMR and X-ray Analysis of Structural Transformations in O-H•••N Heterosynthons Formed by H-Bond-Mediated Molecular Recognition.  3. **M. Khan**, V. Enkelmann, G. Brunklaus. *Cryst. Growth & Des.,* **2009**, 9, 2354-2362. O-H• N synthon: A Robust Supramolecular Unit for Crystal Engineering.  4. **M. Khan**, V. Enkelmann, G. Brunklaus. *CrystEngComm.*, **2009**, 11, 1001-1005. Probing atomic level structural transformation in crystal of O–H••N synthon.  5. **M. Khan**, V.Enkelmann, G. Brunklaus*. J. Am. Chem. Soc.,* **2010**, 132, 5254-5263. Crystal Engineering of Pharmaceutical Co-crystals: Application of Methyl Paraben as Molecular Hook”    6. **M. Khan**, V.Enkelmann, G. Brunklaus. *CrystEngComm,* **2011**, 13, 3213-3223. Heterosynthon mediated tailored synthesis of pharmaceutical complexes: a solid-state NMR approach.  7. **M. Khan**, M. Khan, S. F. Adil, M. N. Tahir, W. Tremel, H. Z. Khatlan, A. Al-warthan, M. R. H. Siddique, *Int. J. Nanomed.,* **2013**, 8, 1507-1516. Green synthesis of silver nanoparticles mediated by pulicaria glutinosa plant extract  8. S. F. Adil, M. E. Assal, **M. Khan**, A. Al-Warthan, M. Rafiq H. Siddiqui. *Oxidation Communications*, **2013**, 36, 778–791. Nano silver-doped manganese oxide as catalyst for oxidation of benzyl alcohol and its derivatives:synthesis, characterisation, thermal study and evaluation of catalytic properties.  9. **M. Khan**, M. Khan, M. Kuniyil, S. F. Adil, A. Al-Warthan, H. Z. Alkhathlan, W. Tremel, M. R. H. Siddiqui, M. N. Tahir. *Dalton Trans.,* **2014**, 43, 9026-9031. Biogenic Synthesis of Palladium Nanoparticles Using Plucaria Glutinosa Plant Extract and Their Catalytic Activity towards Suzuki Coupling Reaction  10. S. F. Adil, M. E. Assal, **M. Khan**, A. Alwarthan, M. R. H. Siddiqui. *Arabian J. Chem..,* **2014**, 7, 1192. Gold & Silver Nanoparticles Supported on Manganese Oxide: Synthesis, Characterization and Catalytic Studies for Selective Oxidation of Benzyl Alcohol.  11. **M. Khan**, S.T. Khan, M. Khan, S. F. Adil, J. Musarrat, A. A. Alkhedhairy, A. Al-Warthan, M. R. H.Siddiqui, H. Z. Alkhathlan. *Int. J. Nanomed*., **2014**, 9, 3551-3561. Anti-Bacterial Properties of Silver Nanoparticles Synthesized Using Pulicaria glutinosa Plant Extract as Green Bio-reductant  12. **M. Khan**, A. H. Al-Marri, M. Khan, S. F. Adil, A. Al-Warthan, H. Z. Alkhathlan, W. Tremel, M. R. H. Siddiqui, M. N. Tahir. *RSC Adv.,* **2014**, 4, 24119-24125. Pulicaria Glutinosa Plant Extract: A Green and Eco-Friendly Reducing Agent for the Preparation of Highly Reduced Graphene Oxide.  13. A. H. Al-Marri, **M. Khan**, M. Khan, S. F. Adil, A. Al-Warthan, H. Z. Alkhathlan, W. Tremel, J. P. Labis, M. N. Tahir, M. R. H. Siddiqui*. Int. J. Mol. Sci.,* 16, **2015,** 1131. P. Glutinosa Extract: A Toolbox to synthesize highly reduced graphene oxide-silver nanocomposites for efficient surface-enhanced Raman scattering.  14. S. F. Adil, M. E. Assal, **M. Khan**, A. Al-Warthan, M. R. H. Siddiqui, L. M. Liz-Marzán, *Dlaton Trans.,* 44, **2015**, 9709. Biogenic synthesis of metallic nanoparticles and prospects toward green chemistry.  15. S. F. Adil, S. Alabbad, **M. Khan**, A. Alwarthan, N. Mohri, W. Tremel, M. N. Tahir, M R. H Siddiqui. *Nanoscale Res. Lett.* 10, **2015**, 52. Nano Vanadia Supported Nickel Manganese Oxide: Synthesis, Characterization and Evaluation as Oxidation Catalyst for Aromatic Alcohols.  16. **M. Khan**, A. H. Al-Marri, M. Khan, M. R. Shaik, N. Mohri, S. F. Adil, M. Kuniyil, H. Z Alkhathlan, A. Al-Warthan, W. Tremel, M. N. Tahir and M. R. H Siddiqui. *Nanoscale Res. Lett.* 10, **2015**, 281. Green Approach for the Effective Reduction of Graphene Oxide Using Salvadora persica L. Root (Miswak) Extract.  17. S.S.P. Sultana, D.H.V. Kishore, M. Kuniyil, **M. Khan**, A. Alwarthan, K.R.S. Prasad, J. P. Labis, S. F. Adil. *Arab. J. Chem.,* 8, **2015**, 766. Ceria doped mixed metal oxide nanoparticles as oxidation catalysts: Synthesis and their characterization.  18. D. Ali, H. Ali, S. Alarifi, S. Kumar, M. Serajuddin, A. P. Mashih, M. Ahmed, **M. Khan.** S. F. Adil, M. R. Shaik, A. A. Ansari. *Arch. Environ. Contam. Toxicol.,* **2015**, 68, 543. Impairment of DNA in a Freshwater Gastropod (Lymnea luteola L.) After Exposure to Titanium Dioxide Nanoparticles.    19. **M. Khan**, M. N. Tahir, S. F. Adil, H. U. Khan, M. R. H. Siddiqui, A. A. Al-warthan, W. Tremel. *J. Mater. Chem. A.,* **2015**, 3, 18753. Graphene based metal and metal oxidenanocomposites: synthesis, properties and their applications.  20. A. A. Mostafa, S. R. M. Sayed, E. N. Solkamy, **M. Khan**, M. R. Shaik, A. Al-Warthan, S. F Adil. *J. Nanomater.,* **2015**, 789178. Evaluation of Biological Activities of Chemically Synthesized Silver Nanoparticles.  21. M. Khan, **M. Khan**, A. H. Al-Marri, A. Al-Warthan, H. Z Alkhathlan, M. R. H. Siddiqui, V. L. Nayak, A. Kamal, S. F. Adil. *Int. J. Nanomed.,* **2016**, 1, 873. Apoptosis inducing ability of silver decorated highly reduced graphene oxide nanocomposites in A549 lung cancer.  22. A. M. Elgorban, A. El-Rahim M. El-Samawaty, M. A. Yassin, S. R. Sayed, S. F. Adil, K. M. Elhind, M. Bakri and **M. Khan**. *BIOTECHNOl & BIOTECHNOLOGICAL EQUIP.*, **2016**, 30, 56. Antifungal silver nanoparticles: synthesis, characterization and biological evaluation.  23. M. R. Shaik, M. Kuniyil, **M. Khan**, N. Ahmad, A. Al-Warthan, M. R. H. Siddiqui, S. F. Adil\*. *Molecules*, **2016**, 21, 292. Modified Polyacrylic Acid-Zinc Composites: Synthesis, Characterization and Biological Activity.  24. A. H. Al-Marri, M. Khan, M. R. Shaik, N. Mohri, S. F. Adil, M. Kuniyil, H. Z. Alkhathlan, A. Al-Warthan, W. Tremel, M. N Tahir, **M. Khan**\*, M. R. H. Siddiqui\*. *Arab. J. Chem.,* **2016**, 9, 835-845. Green synthesis of Pd@graphene nanocomposite: Catalyst for the selective oxidation of alcohols.  25. R. Varala, V. Narayana, S. R. Kulakarni, **M. Khan**, A. Alwarthan, S. F. Adil. *Arab. J. Chem.,* **2016,** 9, 550. Sulfated Tin Oxide (STO)-Structural Properties & Application in Catalysis: A Review.  26. M. R. Shaik, G. H. Albalawi, S. T. Khan, **M. Khan**, S. F. Adil, M. Kuniyil, A. Al-Warthan, M. R. H. Siddiqui, H. Z. Alkhathlan, M. Khan\*. *Molecules*, **2016**, 21, 1478. “Miswak” Based Green Synthesis of Silver Nanoparticles: Evaluation and Comparison of Their Microbicidal Activities with the Chemical Synthesis.  27. A. Alsalme,\* M. A. Toraba, **M. Khan**, N. A. Alzaqri, S. G. Alshammari, M. A. Alotaibi, M. R. H. Siddiqui\*. *RSC Adv.,* **2016**, 6, 86340. Facile synthesis of nickel based nanostructures from Ni[EMIM]Cl2 ionic liquid precursor: effects of thermal and chemical methods on the properties of nanoparticles.  28. A.M. Elgorban,\* A. El-Rahim M. El-Samawaty, O. H. Abd-Elkader, M. Yassin, S. R.M. Sayed, **M. Khan**, S. F. Adil. *Saudi J. Bio. Sci.,* **2017**, 24, 1522-1528. Bioengineered silver nanoparticles using Curvularia pallescens and its fungicidal activity against Cladosporium fulvum.  29. **M. Khan**, G. H. Albalawi, M. R. Shaik, M. Khan, S. F. Adil, M. Kuniyil, H. Z. Alkhathlan, A. Al-Warthan, M. R. H. Siddiqui\*. *J. Saudi Chem. Soc*., **2017**, 21. 450. Miswak mediated green synthesized palladium nanoparticles as effective catalysts for the Suzuki coupling reactions in aqueous media.  30. M. E. Assal, M. Kuniyil, **M. Khan**, A. Al-Warthan, M. R. H. Siddiqui, W. Tremel, M. N. Tahir, S. F. Adil\*. *ChemOpen.*, **2017**, 6, 112. Synthesis and Comparative Catalytic Study of Zirconia–MnCO3 or –Mn2O3 for the Oxidation of Benzylic Alcohols.  31. **M. Khan**,\*,G. Brunklaus, S. Ahmad. *Arabian J. Chem.,* **2017**, 10, 708. Probing the molecular orientation of chemically polymerized polythiophene-polyrotaxane via solid state NMR.  32. S.S.P. Sultana, D.H.V. Kishore, M. Kuniyil , **M. Khan,** M. R. H. Siddiqui, A. Al-Warthan b , K.R.S. Prasad, N. Ahmad , S. F. Adil, *Arabian J. Chem.,* **2017**, 10, 448. Promoting effects of thoria on the nickel-manganese mixed oxide catalysts for the aerobic oxidation of benzyl alcohol.  33. **M. Khan,** M. Kuniyil, M. R. Shaik, M. Khan, S. F. Adil, A. Al-Warthan, H. Z. Alkhathlan, W. Tremel, M. N. Tahir and M. R. H. Siddiqui. *Catalysts* **2017**, 20. Plant Extract Mediated Eco-Friendly Synthesis of Pd@Graphene Nanocatalyst: An Efficient and Reusable Catalyst for the Suzuki-Miyaura Coupling.    34. M R. Shaik, A. H. Al-Marri, S. F. Adil, N. Mohri, B. Barton, M. R. H. Siddiqui, A. Al-Warthan, J. P. Labis, W. Tremel, **M. Khan,\*** and M. N. Tahir. *Chem Select.,* **2017**, 2, 3078. Benzyl Alcohol Assisted Synthesis and Characterization of Highly Reduced Graphene Oxide (HRG)@ZrO2 Nanocomposites.  35. M. R. Shaik, Z. J. Q. Ali, M. Khan, M. Kuniyil, M. E. Assal, H. Z. Alkhathlan, A. Al-Warthan, M. R. H. Siddiqui, **M. Khan,\*** and S. F. Adil. *Molecules,* **2017**, 22, 165. Green Synthesis and Characterization of Palladium Nanoparticles Using Origanum vulgare L. Extract and Their Catalytic Activity  36. M. E. Assal, M. Kuniyil, **M. Khan,** M. R. Shaik, A. Al-Warthan, M. R. H. Siddiqui, J. P. Labis, and S. F. Adil. *Adv. Mater. Sci. Eng.,* **2017**, Article ID 3958319. Comparative Catalytic Evaluation of Nano-ZrOx Promoted Manganese Catalysts: Kinetic Study and the Effect of Dopant on the Aerobic Oxidation of Secondary Alcohols.  37. S. F. Adil, M. E. Assal, M. Kuniyil, **M. Khan,** M. R. Shaik, A. Alwarthan, J. P. Labis, and M. R. H. Siddiqui. *Mater Exp.,* **2017**, 7. 79-92. Synthesis and comparative catalytic study of zinc oxide (ZnOx) nanoparticles promoted MnCO3, MnO2 and Mn2O3 for selective oxidation of benzylic alcohols using molecular oxygen.  38. M. E. Assal, M. Kuniyil, M. R. Shaik, **M. Khan,** A. Warthan, M. R. H. Siddiqui, S. F. Adil. *Journal of Chem.,* **2017**, Article ID 2937108. Synthesis, Characterization, and Relative Study on the Catalytic Activity of Zinc Oxide Nanoparticles Doped MnCO3, –MnO2, and .–Mn2O3 Nanocomposites for Aerial Oxidation of Alcohols.  39. S.S.P. Sultana, R. Ali, M. Kuniyil, **M. Khan**, A Warthan, D.H.V. Kishore, M.E. Assal, K.R.S. Prasad, N. Ahmad, M. R. H. Siddiqui, S. F. Adil. *J. Saudi Chem Soc.,* **2017**, 21, 878. Ytterbia doped nickel–manganese mixed oxide catalysts for liquid phase oxidation of benzyl alcohol.  40. M. E. Assal, M. R. Shaik, M. Kuniyil, **M. Khan,** A Y. Alzahrani, A. Al-Warthan, M. R. H. Siddiqui,\* S. F. Adil\*. *Catalysts*, **2017**, 7, 391. Mixed Zinc/Manganese on Highly Reduced Graphene Oxide: A Highly Active Nanocomposite Catalyst for Aerial Oxidation of Benzylic Alcohols.  41. M. E. Assal, M. R. Shaik, M. Kuniyil, **M. Khan**, A. Al-Warthan, M. R. H. Siddiqui, S. M. A. Khan, W. Tremel, M. N. Tahir\*, S. F. Adil\*. *RSC Adv*., **2017**, 7, 55336. A highly reduced graphene oxide/ZrOx–MnCO3 or–Mn2O3 nanocomposite as an efficient catalyst for selective aerial oxidation of benzylic alcohols.  42. M. E. Assal, M. R. Shaik, M. Kuniyil, **M. Khan**, J. V. S. Kumar, A. Yahya Alzahrani, A. Al-Warthan, S. A. Al-Tamrah, M. R. H. Siddiqui, S. A. Hashmi, and S. F. Adil. *Mater. Express.*, **2018**, 8,1. Silver-doped manganese based nanocomposites for aerial oxidation of alcohols.  43. M. R. Shaik, **M. Khan**, M. Kuniyil, A. Al-Warthan, H. Z. Alkhathlan, M. R. H. Siddiqui , J. P. Shaik, A. Ahamed, A. Mahmood, M. Khan, and S. F. Adil. *Sustainability* **2018**, 10, 913. Plant-Extract-Assisted Green Synthesis of Silver Nanoparticles Using Origanum vulgare L. Extract and Their Microbicidal Activities.  44. M. E. Assal, M. R. Shaik, M. Kuniyil, **M. Khan**, A. Al-Warthan, M. R. H. Siddiqui, S. F. Adil. *Metals,* **2018**, 8, 468. Ag2O Nanoparticles-Doped Manganese Immobilized on Graphene Nanocomposites for Aerial Oxidation of Secondary Alcohols.  45. **M. Khan**, M. R. Shaik, S. F. Adil, S. T. Khan, A. Al-Warthan, M. R. H. Siddiqui, M. N. Tahir and W. Tremel. *Dalton Trans.,* **2018**. 47, 11988. Plant extracts as green reductants for the synthesis of silver nanoparticles: lessons from chemical synthesis.  46. A. Alsalme, A. A. Alsharif, H. Al-Enizi, **M. Khan**, S. G. Alshammari, M. A. Alotaibi, R. Khan, M. R. H. Siddiqui*. J. Chem.,* **2018**, Article ID 7037461. Probing the Catalytic Efficiency of Supported Heteropoly Acids for Esterification: Effect of Weak Catalyst Support Interactions.  47. T. Al-Muhimeed, A. A. Al-Kahtani, R. M. Mahfouz, **M. Khan**, M. R. H. Siddiqui. *Adv. Mater. Sci. Eng.,* **2018**, Article ID 9128696. A Study and Comparison of the Preparation of Gadolinium Aluminate Nanoparticles Using *γ*-Irradiated and Unirradiated Precursors.  48. M. E. Assal, M. R. Shaik, M. Kuniyil, M. Khan, A. Al-Warthan, M. Rafiq H. Siddiqui, S. F. Adil. Oxidation Communications, **2018**, 41, 372. ZnO*x*–MnCO3, –MnO2 OR –Mn2O3 Deposited on Highly Reduced Graphene Oxide Nanocomposites as an Efficient Catalyst for Aerial Oxidation of Different Types of Alcohols.  49. K. M. Batoo, E. H. Raslan, Y. Yang, S. F. Adil, M. Khan, A. Imran, Y. Al-Douri. *AIP Advances*. **2019**, **9**, 055202. Structural, Dielectric and Low Temperature Magnetic Response of Zn Doped Cobalt Ferrite Nanoparticles.  50. M. E. Assal, M. R. Shaik, M. Kuniyil, **M. Khan**, A. Warthan, A. I. Alharthi, R. V. M. R. H. Siddiqui, S. F. Adil. *Arab. J. Chem*. **2019**, 12, 54. 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**SCIENTIFIC CONFERENCES ATTENDED AND POSTERS PRESENTED:**

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| * SUMMER SCHOOL (MICROSCOPY METHODS IN MOLECULAR SCIENCE) July **2006**, EBENBURG GERMANY.      * ROCKY MOUNTAIN CONFERENCE ON SOLID-STATE NMR, July, **2007** BRECKENRIDGE, COLLORADO, USA. * GDCH MEETING (Gesellschaft Deutscher Chemiker) ON SOLID-STATE NMR, September, **2007**. GÖTTINGEN, GERMANY. * IUPAC CONFERENCE ON CRYSTAL ENGINEERING, Aug, **2009** GLASGOW, SCOTLAND, UK. * IACIS CONFERENCE ON COLLOIDS, May, 2015, Mainz, Germany. * ICES2023 International Conference and Exhibition for Science, Feb, 2023, RIYADH, KINGDOM OF SAUDI ARABIA |

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* *GRAPHENE-INORGANIC NANOCOMPOSITES: SYNTHESIS and APPLICATIONS (In Press),* **King Saud University Press.**

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**PATENTS**

* S. F. Adil, M. R. H. Siddiqui, S. H. Alabbad, A. A. Al-Warthan, **M. Y. Khan**, M. Kuniyil, [Titania-supported mixed metal oxide catalyst](https://patents.justia.com/patent/11052379). PATENT-2021-US 11 052 379 B1

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