

CURRICULUM VITAE

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DATE OF BIRTH : August 14, 1963
MARTIAL STATUS : Married
CITIZENSHIP : Saudi Arabian

RESEARCH INTEREST:

My research is focuses on the construction of nanostructured, organic-inorganic hybrid materials for various applications. Understanding of the growth of nanostructures and designing novel materials such as organic-inorganic hybrid, gel-nanoparticles, liquid crystal and carbon nanoparticles is our main interest. Our research work addresses four major themes related to the applications of materials:

- **Metal nanoparticles and Nanocomposites as Electro catalyst:**

Controlling the size and morphology of nanoparticles is an interesting area for electrocatalytic research. After tuning the structures of these nanomaterials, we, are achieving the efficient catalytic activity to promote the oxidation and reduction reactions for fuel cells.

- **Carbon and Metal Nanoparticles Based Materials for Electrochemical Supercapacitors:**

Electrochemical supercapacitors (ES) are needed as components in many advanced power systems requiring high power density. To achieve the high power density, our research interest in electrochemical supercapacitors is related to the development of electrode materials using metal oxide and hetroatoms doped carbon nanostructures.

- **Fabrication of Nanomaterials for Energy saving Lights (OLEDs):**

Currently our research is focused on the development of new light emitting device technologies for flat panel displays. One technology that shows promise involves organic light emitting diodes (OLEDs). These devices are built form a variety of different molecular and polymeric materials, which serve as electron and hole carriers, sites of recombination and luminescent zones.

- **Detection, Degradation and Removal of Inorganic and Organic pollutants form aqueous solution:**

Our research also focused to fabricated nanocomposites such as polymeric nanocomposites, carbon based nanocomposites and used for water treatments, and removal of organic and inorganic contaminants in wastewater. On the other hand, we are using the nanocomposites for photocatalytic degradation of pollutants in aqueous solution.

EDUCATION:

- **Ph.D. Inorganic Chemistry**, 1992, Leicester University, Leicester, LE1 7RH, England.
- **M.Sc. Inorganic Chemistry**, 1989, Northeastern University Boston, MA, USA.
- **B.Sc. Chemistry**, 1984, King Saud University, Riyadh, Saudi Arabia.

PROFESSIONAL EXPERIENCE:

- **PROFESSOR**, Department of Chemistry, *King Saud University*, Riyadh, Saudi Arabia. (2004-Now)
- **ASSOCIATE PROFESSOR**, Department of Chemistry, *King Saud University*, Riyadh, Saudi Arabia. (1998-2004)
- **ASSOCIATE PROFESSOR**, *King Khalid Military Academy*, Riyadh, Saudi Arabia. (1997–1998)
- **ASSISTANT PROFESSOR**. *King Khalid Military Academy*, Riyadh, Saudi Arabia. (1993–1997)
- **POST-DOCTOR**, *Leicester University*, Leicester, England. (1995-1996)
- **POST-DOCTOR**, *Northeastern University*, Boston, MA, USA. (1994)
- **TEACHING ASSISTANT**. *Leicester University*, Leicester, England. (1990-1992)
- **RESEARCH ASSISTANT**, *Northeastern University*, Boston, MA, USA. (1988-1989)
- **CHEMISTRY INSTRUCTOR**, *King Khalid Military Academy*, Riyadh, Saudi Arabia. (1985-1986)

ADMINISTRATIVE AND CONSULTING EXPERIENCE:

- **ACTING DEAN, College of Science & General Studies, Alfaisal University,** Riyadh, Saudi Arabia. (Sep 2016– Sep 2017)
- **DEAN, Community College in Riyadh, King Saud University,** Riyadh, Saudi Arabia. (2006–2013)
- **DIRECTOR, Preparatory Year for Humanities Colleges, King Saud University,** Riyadh, Saudi Arabia (2010-2011)
- **SUPERVISOR, Bridging Program in Health Specialties, King Saud University,** Riyadh, Saudi Arabia. (2010)
- **VICE DEAN, Community College in Riyadh, King Saud University,** Riyadh, Saudi Arabia. (2003–2006)
- **DEPUTY CHAIRMAN, Department of science, King Khalid Military Academy,** Riyadh, Saudi Arabia. (1995 –1997)
- **CHIEF, Education and Training. Al-Imam General Hospital,** Riyadh Health Directorate, Riyadh, Saudi Arabia. (1997 – 1998)
- **CONSULTANT (Part-Time), Safety and Fire Administration, Civil Defense Management,** Riyadh, Saudi Arabia. (1995 – 2013)

COMMITTEE AND COUNCILS MEMBERSHIPS:

- King Saud University, University Council (2006-2013)
- King Saud University, Deans' Council (2007-2013)
- Member, RC-2020 (Renewal & Change is an international association of 27 top and leading community colleges around the world) (2011-2015)
- Member of Principal Team Strategic Planning Project King Saud University (2008-2010)
- Member of the Higher Committee of Academic Accreditation, KSU (2008-2013)
- Chair, Secretariat of Community College Deans' Committee, KSA (2008-2013)
- Member of the Consultative Council, Community College, Tabuk University, KSA (2009-2013)
- Standing Committee for KSU Senior Staff Promotion (2007-2014)
- Chairman, Committee for Developing Educational Outputs at Community Colleges (2007-2013)

- Standing Committee for Propagating Community Colleges (2007-2014)
- Standing Committee for Protection Against Chemical Pollution, (2005-2014)
- Academic Committee for King Saud University Community Colleges, in the Kingdom, (2005-2006)
- Ministry of Higher Education Academic Committee of Community Colleges and Community Colleges in the Kingdom, (2005-2006)
- Committee of Measurement and Assessment, Ministry of Higher Education, (2003-2014)
- Committee of the 4th University and Community week, (2003-2004)
- Committee of the 3rd University and Community week, (2002-2003)
- Coordinator of Cultural Activities and Public Relations, Chemistry Department, Science College, (2002-2003)

ACHIEVEMENTS:

- King Saud University, Scientific Excellence Prize for **Research Quality Award (2018)**.
- King Saud University, Scientific Excellence Prize (third) for **Innovations, and Technology (2016)**.
- As the Dean, Riyadh Community College was the first college in King Saud University to obtain international academic accreditation. And the first college among all colleges in Kingdom, public and private to obtain international academic accreditation.
- Membership of RC-2020, a world class association that comprises of distinguished deans of excellent international community colleges.
- As the Dean, Riyadh Community College has been ranked second in the field of student activities, third in terms of best websites; and third in preparedness and discipline in 2012 among all the colleges in King Saud University.
- Establishing the Saudi Association of Community Colleges in KSA.

SCHOLARSHIP:

- National Guards Scholarship for obtaining M.Sc. degree, (1986 – 1989)
- Research Fellowship Award, Northeastern University, (1989)
- \$5.000 Academic Achievement Award from the Saudi Arabian Embassy at USA.
- National Guards Scholarship for obtaining Ph.D. degree, (1989 – 1992)
- Research Fellowship, Leicester University, (1991)
- Certificate of Distinguished Research Work- Grade Three (bronze) awarded by King Abdulaziz City for Science and Technology. Research Title: “Chemical Preparation and Characterization of Some Radiopharmaceuticals and Pharmaceuticals and its Bio-evaluation”

RESEARCH PROJECTS:

- Principal investigator for three years’ project (2000-2003) entitled “***Chemical Preparation and Characterization of Some Radiopharmaceuticals and Pharmaceuticals and its Bio-evaluation***”. Supporting by King Abdulaziz City for Science and Technology with total budget of one million and thirty-one riyals (SR 1031,000).
- Principal investigator for one-year project (2000) entitled “***Kinetics of Thermal Decomposition of Some Natural and Modified Rubber Before and After γ -Irradiation.***” Supported by SABIC with total budget of fifty thousand riyals (SR 50,000).
- Principal investigator for one-year project (2002) entitled “***Electrical Conductivity and Thermal Decomposition Behavior of Some Metallo-phosphazene Polymer***” Supported by SABIC with total budget of fifty thousand riyals (SR 50,000).
- Principal investigator for project entitled (2009) “***Development of Novel Thermal resistant and Microbial resistant metal containing Epoxy Resin for Coating Technology and Paint Industries***” Supported by Center of Excellence for Research in Engineering Materials total budget (SR 125,000).
- Principal investigator for project entitled (2010) “***Synthesis, Characterization and in vitro Biological Evaluation of Polyamide metalodendrimers***” Supported by College of Science, Research Center total budget (SR 50,000).
- Principal investigator for Prolific Research Group project (2015) (PRG-1436-19), Supported by Deanship of Scientific Research of King Saud University total budget (SR 500,000).

- Principal investigator for International Research Group project (2016) (**IRG-14-40**), Supported by Deanship of Scientific Research of King Saud University total budget (**SR 300,000**).
- Principal investigator for Research Group project (RG-1435-007), Supported by Deanship of Scientific Research of King Saud University total budget (**SR 150,000**).
- Principal investigator for ISPP (ISPP-0024), Supported by Deanship of Scientific Research of King Saud University total budget (**SR 200,000**).

TRANSLATED BOOKS:

- Translation of a text book "*Ion in Solution*", 2006.
- Translation of a text book "*The Mechanisms of Reactions at Transition Metal Sites*", 2008.

SUPERVISION OF SCIENTIFIC THESIS:

- Principal Supervisor, M.Sc. Thesis Submitted by **Hussein Al-Zahrani**, entitled: "Assessment of the extent of adherence of the staff in the industrial plants in dealing with dangerous chemical material: A study of the industrial area in Riyadh", Naif Arab Academy for Security Sciences, Riyadh, 1999.
- Principal Supervisor, M.Sc. Thesis Submitted by **Fatima Al Halawani** entitled: "Preparation and characterization of new complexes of Indium and Rhenium of the medical and pharmaceutical applications." King Saud University, 2001.
- Principal Supervisor, M.Sc. Thesis Submitted by **Abdullah Sulaiman Mayouf** entitled: "Effects of gamma irradiation on the behavior of electrical conductivity and thermal decomposition of some metallo-phosphazene polymers " King Saud University, 2002.
- Principal Supervisor, PhD. Thesis Submitted by **Eida S. Al-Anazy** entitled: "Synthesis, characterization and antimicrobial activities of 1,4,7-triazacyclonone-N, N, N-triacetic acid (NOTA) based polyamide ligands and their polymer metal complexes" King Saud University, 2015.
- Principal Supervisor, M.Sc. Thesis Submitted by **Abdullah Baker Al-hajji** entitled "Synthesis, Characterization and anti-bacterial activates of Silver and Copper nanoparticles loaded hydrogels" King Saud University, 2016.
- Principal Supervisor, M.Sc. Thesis Submitted by **Basheer Mohammed Almaswari** entitled "Polymer derived heteroatoms-doped magnetic carbon nanoparticles for heavy metal ion adsorption". King Saud University, 2018.

- Principal Supervisor, M.Sc. Thesis Submitted by **Amin Nasir Haseen Habra** entitled. “Development of supercapacitors based on conducting polymers and their composites with magnetic metal oxide”. King Saud University, 2018.

EXAMINING:

Member of the thesis examining committee, more than 25 Ph.D. and Master students in King Saud University and other universities in Saudi Arabia.

PATENTS:

- **S. M. Alshehri**, Tansir Ahamad Phosphazene-Formaldehyde Polymers and their Polymer Metal Complexes, **US patent, 9193834, 2015.**
- **S. M. Alshehri**, Tansir Ahamad Synthesis of Phosphazene formaldehyde resin and their application for removal of heavy metal from industrial waste water. **US patent, 9006299, 2015.**
- **S. M. Alshehri**, Tansir Ahamad, Method for removal of heavy metal from industrial waste water. **European patent, EP2598445B1, 2015.**
- **S. M. Alshehri**, Tansir Ahamad, Hamad A. Al-lohedan, Yusuke Yamauchi. Method of fabricating macroporous carbon capsules from pollen grains. **US Patent 9,346,678; 2016.**
- **S. M. Alshehri**, Tansir Ahamad, Naushad M, Al-Othman ZA, Aldalbahi A. Method for removing organic dye from wastewater. **US Patent 9,334,176; 2016.**
- **S. M. Alshehri**, Tansir Ahamad, Naushad M, Al-othman ZA, Ahmed J. Microporous polymeric resin for the removal of organic color pollutant from aqueous solution, **US patent number, US96,241,14 (2017)**
- **S. M. Alshehri**, Tansir Ahamad, Naushad M, Al-othman ZA, Ahmed J. Ultrafast removal of organic pollutant form aqueous solution using biocompatible and coast effective adsorbent. **US patent number, US 96,438,61 (2017).**
- **S. M. Alshehri**, Tansir Ahamad, Removal of organic pollutants form aqueous solution magnetic nitrogen doped carbon capsules. **US patent number (US, 9006299) (2018).**
- **S. M. Alshehri**, Tansir Ahamad, Naushad M, Al-Othman ZA, Carboxylic functionalized magnetic nanocomposite, **US patent number (US, 9987617) (2018).**
- **S. M. Alshehri**, Abdullah M Alenizi, Tansir Ahamad, Oxygen reduction reaction electrocatalyst. **(US, 10026970) (2018).**

- **S.M. Alshehri**, T. Ahamad, Magnetic adsorbent for organic pollutant removal, **US Patent App. 15/715,022, 2019.**
- **S. M. Alshehri**, Tansir Ahamad, Biomass derived porous nitrogen doped carbon for energy storage devices. **(submitted, 2019).**
- **S. M. Alshehri**, Tansir Ahamad, Removal of organic pollutant form aqueous solution using nitrogen doped magnetic porous carbon capsules **(submitted, 2019.)**
- Abdullah M Alenizi, **S. M. Alshehri**, Ayman Yusuf, Tansir Ahamad, Pt/N-enriched hierarchically porous carbon nanocomposite for highly efficient electrocatalyst for oxygen reduction reaction. **(submitted, 2019).**
- **S. M. Alshehri**, Tansir Ahamad, Fabrication of egg albumin and curcumine based hydrogel **(submitted, 2019).**

PUBLICATIONS AND CONFERENCE:

More than 30 conferences were attended to present poster and oral work.

The lists of publication:

- [1] **S. M. Alshehri**, G. Davies, M. A. El-Sayed and A. El-Toukhy, Products and Kinetics of Direct, Specific Transmetalation of $(\mu_4\text{-O})\text{N}_4\text{Cu}(\text{Ni}(\text{H}_2\text{O}))_3\text{Cl}_6$ (N= N,N-Diethylnicotinamide) by the $\text{M}(\text{NS})_n$ Reagents (NS= Monoanionic S-Methyl Isopropylidenehydrazinecarbodithioate) in Nitrobenzene: A Relationship Between Precursor Stabilities and Product Formation Rates. **Inorg. Chem.**, 29, 1198 (1990).
- [2] **S. M. Alshehri**, G. Davies, M. A. El-Sayed and A. El-Toukhy, Rate law Variation in the Specific Monotransmetalation of $(\mu_4\text{-O})(\text{N},\text{py})_4 \text{Cu}_{4-x} \text{M}_x\text{X}_6$ Complexes with $\text{Zn}(\text{NS})_2$ in Nitrobenzene. **Inorg. Chem.**, 29 1206 (1990).
- [3] **S. M. Alshehri** and J. Burgess, Activation Volumes for Dissociation of Pentacyanoferrate(II) : The Role of Ligand Size. **Inorgica. Chemica Acta.**, 181, 53 (1991).
- [4] **A. Barriors**, M. Graciani, R. Jimenez, E. Mioz, F. Sanchez, M. Moya, **S. M. Alshehri** and J. Burgess, Salt Effects on the Kinitics of Dissocation of the Pentacyano-4-pyridineferrate(II) Anion. **Transition Met. Chem.**, 17 231 (1992).
- [5] **S. M. Alshehri**, J. Burgess, Kinetics of Base Hydrolysis of Tris(1,10-phenanthroline) iorn(II) and of Solvolysis of Cis-Dichlorobis(1,2-ethanediamine)cobalt(III) in Water and Doil Mixture. **Int. J. Chem. Kinet.**, 25, 113 (1993).

- A. Al-Alousy, **S. M. Alshehri**, J. Burgess, M. Graciani, M. Moya, E. Munoz, A. Rodrigues and F. Sanchez, Volumes of Activation for Dissociation of Pentacyanoferrate(II) Through pressure and Salt Effects on Reactivity. **Transition met. Chem.** 18, 179 (1993).
- [6] **S. M. Alshehri**, J. Burgess and C. Hubbard, dissociation Kinitics of $[\text{Fe}(\text{phen})_3]^{2+}$, $[\text{Fe}(\text{bipy})_3]^{2+}$, and $[\text{Fe}(4,4'\text{-Me}_2\text{bipy})_3]^{2+}$ in presence of Cyanide Ion in Aqueous Solution at Pressures up to 1 Kilobar. **Transition Met. Chem.** 18, 228 (1993).
- [7] **S. M. Alshehri**, M. J. Blandamer, J. Burgess, P.Guardado and C. D. Hubbard, Solvation and Reactivity of the Low-Spin Tris-Diimine Iorn(II) Complexes of the Schiff Base Ligand Derived from 2-Benzonylpyridine and 3,4- Dimethylaniline, $[\text{Fe}(\text{Me}_2\text{bsb})_3]^{2+}$. **Polyhedron**, 12, 445 (1993).
- [8] A. Al-Alousy, **S. M. Alshehri**, M. J. Blandmer, N. J. Blundel, J. Burgess, H. J. Cowles, S. Radulovic, P. Guarado and C. D. Hubbard, Solvation and Reactivity of Iron (II)- Diimine Complexes in Sulfoxide-Water Mixtures, **J. Chem. Soc. Faraday Trans**, 89 (7), 1041 (1993).
- [9] J. Benko, O. Vollarva, **S. M. Alshehri**, J. Burgess and R. I. Haines. Activation Volumes for Peroxodisulphite Oxidation of Cobalt(III), Iron(III), and Nickel(III) Complexes. **Transition Met. Chem.** 18, 551 (1993).
- [10] **S. M. Alshehri**, J. Burgess, G. H. Morgan, B. Patel and M. S. Patel. Solvatochromism and Piezochromisim of Pentacyanoferrate(II) Complexes in Binary Aqueous Solvent Media. **Transition Met. chem**, 18, 619 (1993).
- [11] G. Davies, A. Ali, **S. M. Alshehri**, N. El.Kady, M. A. El-Sayed and A. El-Tourkhy,, Transmetalation Mechanisms. **Qatar Univ. Sci. J.**, 13(2),194 (1994).
- [12] **S. M. Alshehri**, J. Burgess, K. A. Darcey and M. S. Patel, Solvation of Ethylmaltol and of Its Iron (III) Complex. **Transition Met, Chem.**, 19, 119, (1994)
- [13] **S. M. Alshehri**, J. Burgess, R. V. Eldik and C. D. Hubbard, leaving Group Effects on Ligand Substitution Reaction of Pentacyanoferrate(II) Complexes: Rate Constant and Activation volume correlations. **Inorica. Chimica. Acta**, 240, 305 (1995).
- [14] A. O. Abdelhamid and **S. M. Alshehri**, Aconvenient Synthesis of Thipnene, 1,3-Thiazole, 2,3-Dihydro-1,3,4-Thiadiazole and Pyrazole Derivatives. **J. Chem. Res. (S)** 240 (1997).
- [15] **S. M. Alshehri**, Reactivity and Solvatochromism of Pentacyanoferrate (II) Complexes in Diol-Water Mixtures. **Transtion Met. Chem.** 22, 553 (1997).
- [16] **S. M. Alshehri**, J. Burgess, S. Parson and A. Cacey, Kinetics of Substitution at Bis-cyclopentadienylvanadium Dichloride. **Int. J.Chem. Kinet.** 29, 835 (1997).
- [17] Ali Shaker, **S. M. Alshehri** and J. Burgess, Salt Effect on Reactivities of Low-Spin Iron(II) Complexes of Diazabutadiene and Schiff Base Ligands. **Transition Met. Chem.** 23, 683 (1998).

- [18] **S. M. Alshehri**, J. Burgess and A. Shaker, Attenuation of Substituent Effects on Reactivities of Low-Spin Iron(II) Complexes of Schiff Base Ligands. **Transition Met. Chem**, 23, 689 (1998).
- [19] **S. M. Alshehri**, M. Monshi, A Basfer, N. Abd El-Salam and R Mahfouz, Kinetics of Thermal Decomposition of Natural Rubber. **J. Saudi Chem. Soc.**, 4(1), 27 (2000).
- [20] **S Alshehri**, J. Burgess, J. Fawcett, S. Parson and David Russell, Structures of Bis-ethylmaltolatodichloro-tin(IV) and -titanium(IV) and of Trichloro(1-methyl-2-ethyl-3-hydroxy-4H-pyridin-4-onato) Aquatin(IV). **Polyhedron**, 19, 399 (2000).
- [21] R Mahfouz, **S. M. Alshehri**, M. Monshi, and N. Abd El-Salam, Isothermal Decomposition of γ -Irradiated Samarium Acetate. **Radiation Physics and Chemistry**, 59, 381 (2000).
- [22] M. Monshi, **S. M. Alshehri** N. Abd El-Salam and R Mahfouz, Isothermal Decomposition of γ -Irradiated Thallous Acetate. **Thermochimica Acta**, 360, 11 (2000).
- [23] **S. M. Alshehri**, M. Monshi, N. Abd El-Salam and R Mahfouz, Kinetics of the Thermal Decomposition of γ -Irradiated Cobaltous Acetate. **Thermochimica Acta**. 363, 61 (2000).
- [24] **S. M. Alshehri**, J. Burgess, J. Fawcett, D. Russell and A. Shaker, Structure of a Precursor in the Synthesis of Low-Spin Iron(II) Complexes of Schiff Base Ligands. **Transition Metal Chemistry**, 25, 691 (2000).
- [25] A. I. Al-Wassil, Kh. A. Al-Farhan, **S. M. Alshehri**, M. Mukalalati and R. M. Mahfouz, Synthesis and Characterization of New In (III), Re(III), Re(V), Pd(II) and Rh(III) Complexes of Toluene-3, 4-Dithiol, **Spectroscopy Letters**, 34(6), 737 (2001).
- [26] **S. M. Alshehri**, Salt Effect on Reactivity for Substitution Reaction of 1,10-Phenanthrolineiron(II) Complex. **J. Molecular Liquids**, 94, 283 (2001).
- [27] R. M. Mahfouz, M. A. S. Monshi, **S. M. Alshehri**, N. M. Abd El-Salam, A. M. A. Zaid, Complexation Reactions of Dy(III), Er(III), Gd(III), Ho(III) And Sm(III) Ions with Thenoyltrifluoroacetone. **Synth. React. Inorg. Met. Org. Chem.**, 31(10) 1873 (2002).
- [28] **S. M. Alshehri**, Complexation Reactions of Rh^{III} , Ru^{III} , Pd^{II} And Pt^{II} With 1H-1,2,4-Triazole-3-Thiol, **Spectroscopy Letters**, 35(3), 349 (2002).
- [29] R. Mahfouz, Kh. A. Al-Farhan, G. Y. Hassen, A. I. Al-Wassil, **S. M. Alshehri** and A. Al-Wallan, Preparation and Characterization of New In(III), Re(III), and Re(V) Complexes With Thenoyltrifluoroacetone and Some Bidentate Heterocyclic Ligands. **Synth. React. Inorg. Met.-Org. Chem.**, 32(3), 489 (2002).
- [30] R. Mahfouz, **S. M. Alshehri**, M. Monshi, and N. Abd El-Salam, Isothermal Decomposition of γ -Irradiated Dysprosium Acetate. **Radiation Effects and Defects in Solids**, 157, 515 (2002).

- [31] **S. M. Alshehri**, R. Mahfouz, M. Monshi, A. Basfar and N. Abd El-Salam, Gamma Irradiation Effects on the Kinetics of Thermal Decomposition of Natural Rubber and Modified Rubber by Carbon-black and Cross-linking Agents Additives. **J. Saudi Chem. Soc.**, 7(1), 41 (2003).
- [32] **S. M. Alshehri**, Metal Complexes of A Schiff-Base Formed by The Condensation of S-Benzylthiocarbamate with N-Acetylmorpholine. **J. Saudi Chem. Soc.**, 7(2), 235 (2003).
- [33] **S. M. Alshehri**, The Kinetics of Adduct Formation Between Heteropolymetallic targets $(\mu_4\text{-O})\text{N}_4\text{Cu}_{4-x}\text{M}_x\text{X}_6$ and $\text{Cu}(\text{NS})_2$ Reagent in Nitrobenzene **Polyhedron**, 22, 2917 (2003).
- [34] **S. M. Alshehri**, and J. Burgess, Salt Effects on Reactivity for Substitution Reactions of Pentacyanoferrate(II) Complexes. **Inorganic Reaction Mechanism**, 5, 59 (2003).
- [35] **S. M. Alshehri**, Isothermal Decomposition of Un-Irradiated and Pre- γ -Irradiated Neodymium Acetate. **J. King Saud Univ.**, 16(2), 149 (2004).
- [36] R. Mahfouz, M. Monshi, A. El-Owais, **S. Alshehri**, M. Al-Osaimi, N. Abd El-Salam, γ -Irradiation Effects on Kinetics and Mechanism of The Thermal Decomposition of Zinc Acetate. **Radiation Effects and Defects in Solids**, 159, 7 (2004).
- [37] R. Mahfouz, **S. M. Alshehri**, M. Monshi, N. Abd El-Salam, Isothermal Decomposition of γ -Irradiated palladium Acetate, **Radiation Effects and Defects in Solids**, 159, 345 (2004).
- [38] R. Alshwafy, W. Z. Alkayali, **S. M. Alshehri**, S.I. Al-Resayes, N.M. Abd El-Salam, and R.M. Mahfouz, Reaction Kinetics and Formation Mechanism of Lithium Titanate, **J. Saudi Chem. Soc.**, 10(3), 475 (2006).
- [39] R. Mahfouz, **S. M. Alshehri**, M. Monshi, A.I. Alhazan, and N. Abd El-Salam, Isothermal decomposition of γ -Irradiated Erbium Acetate, **Radiation Effects and Defects in Solids**, 162(2), 95 (2007).
- [40] **S. M. Alshehri**, R.M. Mahfouz, M.A.S. Monshi, N.M. Abd El-Salam and M.M. Al-Osaimi, Kinetic Analysis of The Thermal Decomposition of Pristine and γ -irradiated Cadmium Acetate, **J. King Saud Univ.**, 21, 119 (2009).
- [41] M.R.H. Siddiqui, **S. M. Alshehri**, I.Kh. Warad, N.M. Abd El-Salam and R.M. Mahfouz, Model Free Approach for Non-Isothermal Decomposition of Un-Irradiated and -Irradiated Silver Acetate: New Route for Synthesis of Ag_2O Nanoparticles, **Int. J. Mol. Sci**, 11, 3600-3609 (2010).
- [42] N. Nishat, S. Parveen, T. Ahamad, P K. Singh, **S. M. Alshehri**, and A. Malik, Synthesis, Characterization of Starch urea based biodegradable ligand and its metal modified coordination polymer, **Bioinorganic Chemistry and Application**. DOI. aip.848130 (2010).
- [43] **S. M. Alshehri** and T. Ahamad, New Thermal and microbial resistant metal containing epoxy polymers, **Bioinorganic Chemistry and Applications**, DOI: 10.1155/2010/976901, (2010).

- [44] A. Malik, S. Parveen. T. Ahamad, **S. M. Alshehri**, and P.K. Singh, Coordination Polymer: Synthesis, Spectral Characterization and Thermal Behaviour of Starch-Urea Based Biodegradable Polymer and Its PolymerMetal Complexes, **Bioinorganic Chemistry and Applications**, DOI: 10.1155/2010/848130, (2010).
- [45] T. Ahamad, and **S. M. Alshehri**, Synthesis Characterization of Polyamide Metallo dendrimers and their Catalytic Activities in Ethylene Oligomerization, **Catal. Lett.**, 138, 171–179 (2010).
- [46] Tansir Ahamad, **S. M. Alshehri**, Synthesis and Characterization of polyamide Metallo dendrimers with their antibacterial and antitumor activities, **Medicinal Chemistry Research**, 21, 2021-2029 (2011)
- [47] Tansir Ahamad, **S. M Alshehri**, TG-FTIR-MS (Evolved Gas Analysis) of bidi tobacco powder during combustion and pyrolysis. **Journal of hazardous materials**; 199-200:200-8 (2011).
- [48] T. Ahamad, **S. M. Alshehri**, Thermal, microbial, and corrosion resistant metal-containing poly(Schiff) epoxy coatings. **Journal of Coatings Technology and Research**, 9(5):515-523 (2012).
- [49] T. Ahamad, **S. M. Alshehri**, Thermal degradation and evolved gas analysis of thioureaformaldehyde resin (TFR) during pyrolysis and combustion. **Journal of Thermal Analysis and Calorimetry**. 109(2):1039-1047 (2012).
- [50] Tansir Ahamad, **S. M. Alshehri**, Synthesis, characterization and anti-microbial activity of phenylurea-formaldehyde resin (PUF) and its polymer metal complexes (PUF-Mn(II)). **Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy**, 96:179-87 (2012).
- [51] Tansir Ahamad, **S. M. Alshehri**, Thermal, microbial, and corrosion resistant metal-containing poly(Schiff) epoxy coatings. **Journal of Coatings Technology and Research** 9(5):515 (2012).
- [52] Tansir Ahamad, **S. M. Alshehri**, Synthesis and characterization of monomeric and polymeric pyridinylimine-based Ni(II) complexes and their catalytic activities in ethylene oligomerization. **Polymer International**, 61(11):1640 (2012).
- [53] Tansir Ahamad, **S. M. Alshehri**, Thermal degradation and evolved gas analysis of epoxy (DGEBA)/novolac resin blends (ENB) during pyrolysis and combustion. **Journal of Thermal Analysis and Calorimetry**, 111(1):445 (2013).
- [54] **S. M. Alshehri**, Amal Al-Fawaz, Tansir Ahamad: Thermal kinetic parameters and evolved gas analysis (TG-FTIR-MS) for thiourea-formaldehyde based polymer metal complexes. **Journal of Analytical and Applied Pyrolysis** 101:215-21 (2013).
- [55] Tansir Ahamad, **S. M. Alshehri**, Physiochemical characterization and antimicrobial evaluation of phenylthiourea-formaldehyde polymer (PTF) based polymeric ligand and its polymer metal complexes. **Spectrochimica**

- [56] **S. M. Alshehri**, Tansir Ahamad, Thermal degradation and evolved gas analysis of N,N '-bis(2 hydroxyethyl) linseed amide (BHLA) during pyrolysis and combustion, **Journal of Thermal Analysis and Calorimetry** 114, 3,1029-1037 (2013).
- [57] **S. M. Alshehri**, Tansir ahamad Thermal degradation and evolved gas analysis: A polymeric blend of urea formaldehyde (UF) and epoxy (DGEBA) resin. **Arabian Journal of Chemistry** 04:07, 6 (2013).
- [58] **S. M. Alshehri**, Tansir Ahamad: Synthesis and characterization of polymer metal complexes and their catalytic activity in ethylene oligomerization. **Advances in Polymer Technology** 32(3) (2013).
- [59] Tansir Ahamad, **S. M Alshehri**: Synthesis and characterization of first- and second-generation polyamide pyridylimine nickel dihalide metallodendrimers and their uses as catalysts for ethylene polymerization. **Polymer International** 63(11) (2014)..
- [60] **S. M. Alshehri**, Mu. Naushad, Tansir Ahamad, Zeid A. Alothman, Ali Aldalbahi: Synthesis, characterization of curcumin based ecofriendly antimicrobial bio-adsorbent for the removal of phenol from aqueous medium. **The Chemical Engineering Journal** 254:181–189 (2014).
- [61] Tansir Ahamad, **S. M. Alshehri**: Green Synthesis and Characterization of Gallium(III) Sulphide (α -Ga₂S₃) Nanoparicles at Room Temperature. **Nanohybrid**, 6:37-46 (2014).
- [62] Y. Agawa, H. Tanaka, S. Torisu, S. Endo, A. Tsujimoto, N. Gonohe, V. Malgras, A. Aldalbahi, **S. M. Alshehri**, Y. Kamachi, C. Li, Y. Yamauchi, Preparation of a platinum electrocatalyst by coaxial pulse arc plasma deposition, **Science and Technology of Advanced Materials**, 16 (2015).
- [63] N. Bakhtiari, S. Azizian, **S. M. Alshehri**, N.L. Torad, V. Malgras, Y. Yamauchi, Study on adsorption of copper ion from aqueous solution by MOF-derived nanoporous carbon, **Microporous and Mesoporous Materials**, 217, 173-177 (2015).
- [64] J.E. Chen, H.Y. Lian, S. Dutta, **S. M. Alshehri**, Y. Yamauchi, M.T. Nguyen, T. Yonezawa, K.C.W. Wu, Synthesis of magnetic mesoporous titania colloidal crystals through evaporation induced self-assembly in emulsion as effective and recyclable photocatalysts, **Physical Chemistry Chemical Physics**, 17, 27653-27657(2015).
- [65] G. Darabdhara, M.A. Amin, G.A.M. Mersal, E.M. Ahmed, M.R. Das, M.B. Zakaria, V. Malgras, **S. M. Alshehri**, Y. Yamauchi, S. Szunerits, R. Boukherroub, Reduced graphene oxide nanosheets decorated with Au, Pd and Au-Pd bimetallic nanoparticles as highly efficient catalysts for electrochemical hydrogen generation, **Journal of Materials Chemistry A**, 3, 20254-20266 (2015).
- [66] K. Eid, V. Malgras, P. He, K. Wang, A. Aldalbahi, **S. M. Alshehri**, Y. Yamauchi, L. Wang, One-step synthesis of trimetallic Pt-Pd-Ru nanodendrites as highly active electrocatalysts, **RSC Advances**, 5, 31147-31152 (2015).

- [67] K. Eid, H. Wang, P. He, K. Wang, T. Ahamad, **S. M. Alshehri**, Y. Yamauchi, L. Wang, One-step synthesis of porous bimetallic PtCu nanocrystals with high electrocatalytic activity for methanol oxidation reaction, **Nanoscale**, 7 16860-16866 (2015).
- [68] P.R. Jothi, K. Shanthi, R.R. Salunkhe, M. Pramanik, V. Malgras, **S. M. Alshehri**, Y. Yamauchi, Synthesis and Characterization of α -NiMoO₄ Nanorods for Supercapacitor Application, **European Journal of Inorganic Chemistry**, 2015, 3694-3699 (2015).
- [69] C. Li, V. Malgras, **S. M. Alshehri**, J.H. Kim, Y. Yamauchi, Electrochemical Synthesis of Mesoporous Pt Nanowires with Highly Electrocatalytic Activity toward Methanol Oxidation Reaction, **Electrochimica Acta**, 183:107-11 (2015).
- [70] S.A.A. Manaf, P. Roy, K.V. Sharma, Z. Ngaini, V. Malgras, A. Aldalbahi, **S. M. Alshehri**, Y. Yamauchi, G. Hegde, Catalyst-free synthesis of carbon nanospheres for potential biomedical applications: Waste to wealth approach, **RSC Advances**, 5, 24528-24533(2015).
- [71] M. Naushad, T. Ahamad, Z.A. Allothman, M.A. Shar, N.S. AlHokbany, **S. M. Alshehri**, Synthesis, characterization and application of curcumin formaldehyde resin for the removal of Cd²⁺ from wastewater: Kinetics, isotherms and thermodynamic studies, **Journal of Industrial and Engineering Chemistry**, 29, 78-86 (2015).
- [72] M. Pramanik, F.K. Shieh, **S. M. Alshehri**, Z.A. Allothman, K.C.W. Wu, Y. Yamauchi, Template-free synthesis of nanoporous gadolinium phosphonate as a magnetic resonance imaging (MRI) agent, **RSC Advances**, 5, 42762-42767 (2015).
- [73] L. Sun, H. Wang, K. Eid, **S. M. Alshehri**, V. Malgras, Y. Yamauchi, L. Wang, One-Step Synthesis of Dendritic Bimetallic PtPd Nanoparticles on Reduced Graphene Oxide and Its Electrocatalytic Properties, **Electrochimica Acta**, 188 845-851 (2015).
- [74] J. Tang, T. Wang, R.R. Salunkhe, **S. M. Alshehri**, V. Malgras, Y. Yamauchi, Three-Dimensional Nitrogen-Doped Hierarchical Porous Carbon as an Electrode for High-Performance Supercapacitors, **Chemistry - A European Journal**, 21 17293-17298 (2015).
- [75] M.B. Zakaria, M. Hu, M. Pramanik, C. Li, J. Tang, A. Aldalbahi, **S.M. Alshehri**, V. Malgras, Y. Yamauchi, Synthesis of Nanoporous Ni-Co Mixed Oxides by Thermal Decomposition of Metal-Cyanide Coordination Polymers, **Chemistry - An Asian Journal**, 10, 1541-1545 (2015).
- [76] R R. Salunkhe, M B. Zakaria , Y Kamachi, **S. M. Alshehri**, Tansir Ahamad , Nagy L. Torad , S X Dou, J H Kim , Y Yamauchi, Fabrication of Asymmetric Supercapacitors Based on Coordination Polymer Derived Nanoporous Materials, **Electrochimica Acta**, 183,94-99 (2015).
- [77] H. Zhang, P. Lin, E. Chen, Y. Tan, T. Wen, A. Aldalbahi, **S.M. Alshehri**, Y. Yamauchi, S. Du, J. Zhang, Encapsulation of an Interpenetrated Diamondoid Inorganic Building Block in a Metal-Organic Framework, **Chemistry - A European Journal**, 21, 4931-4934 (2015).

- [78] H. Zhang, M. Zhang, P. Lin, V. Malgras, J. Tang, **S. M. Alshehri**, Y. Yamauchi, S. Du, J. Zhang, A Highly Energetic N-Rich Metal-Organic Framework as a New High-Energy-Density Material, *Chemistry - A European Journal*, 22 1141-1145 (2016).
- [79] Y. Kamachi, B.P. Bastakoti, **S. M. Alshehri**, N. Miyamoto, T. Nakato, Y. Yamauchi, Thermo-responsive hydrogels containing mesoporous silica toward controlled and sustainable releases, *Materials Letters*, 168, 176-179 (2016).
- [80] H. Shirai, Y.Y. Huang, T. Yonezawa, T. Tokunaga, W.C. Chang, S.M. Alshehri, B. Jiang, Y. Yamauchi, K.C.W. Wu, Hard-templating synthesis of macroporous platinum microballs (MPtM), *Materials Letters*, 164, 488-492 (2016).
- [81] S.C. Wang, Y.S. Hsu, C.T. Hsiao, C.C. Wu, Y.C. Sue, **S. M. Alshehri**, T. Ahamad, Y. Yamauchi, J.E. Chen, K.C.W. Wu, F.K. Shieh, Annulated Mesoporous Silica as Potent Lanthanide Ion Adsorbents and Magnetic Resonance Contrast Enhancing Agents, *Journal of Inorganic and Organometallic Polymers and Materials*, 26, 165-171 (2016).
- [82] Kuan-Chou Chen, Saikat Dutta, Yusuke Yamauchi, **S. M. Alshehri**, Mai Thanh Nguyen, Tetsu Yonezawa, Kun-Hung Shen, Kevin C.-W. Wu: Mesoporous Europium-Doped Titania Nanoparticles (Eu-MTNs) for Luminescence-Based Intracellular Bio-Imaging. *Journal of Nanoscience and Nanotechnology* 15(12):9802-9806 (2016).
- [83] Zhongbin Wu, Ning Sun, Liping Zhu, Hengda Sun, Jiaxiu Wang, Dezhi Yang, Xianfeng Qiao, Jiangshan Chen, **S. M. Alshehri**, Tansir Ahamad, Dongge Ma: Achieving Extreme Utilization of Excitons by an Efficient Sandwich-Type Emissive Layer Architecture for Reduced Efficiency Roll-Off and Improved Operational Stability in Organic Light-Emitting Diodes. *ACS Applied Materials & Interfaces* 8(5):3150-9 (2016).
- [84] Jing Tang, Shichao Wu, Tao Wang, Hao Gong, Huabin Zhang, **S. M. Alshehri**, Tansir Ahamad, Haoshen Zhou, Yusuke Yamauchi: Cage-Type Highly Graphitic Porous Carbon-Co₃O₄ Polyhedron as the Cathode of Lithium-Oxygen Batteries. *ACS Applied Materials & Interfaces* 8:2796-804 (2016).
- [85] Yu-Te Liao, Jeffrey E. Chen, Yohei Isida, Tetsu Yonezawa, Wei-Chen Chang, **S. M. Alshehri**, Yusuke Yamauchi, Kevin C.-W. Wu: De Novo Synthesis of Gold-Nanoparticle-Embedded, Nitrogen-Doped Nanoporous Carbon Nanoparticles (Au@NC) with Enhanced Reduction Ability. *ChemCatChem* 8(3):502-9 (2016)
- [86] Yuichiro Kamachi MBZ, Nagy L. Torad, Teruyuki Nakato, Tansir Ahamad, **S. M. Alshehri**, Victor Malgras, Yamauchi Y. Hydrogels Containing Prussian Blue Nanoparticles Toward Removal of Radioactive Cesium Ions. *Journal for Nanoscience and Nanotechnology* 16:4200-4 (2016).
- [87] Yang D, Zhou X, Wang Y, Vadim A, **S. M. Alshehri**, Ahamad T, Dongee Ma. Deep ultraviolet-to-NIR broad spectral response organic

- photodetectors with large gain. **Journal of Materials Chemistry C** 4:2160-4 (2016).
- [88] Wang J, Chen J, Qiao X, **S. M. Alshehri**, Ahamad T, Dongee Ma. Simple-Structured Phosphorescent Warm White Organic Light-Emitting Diodes with High Power Efficiency and Low Efficiency Roll-off. **ACS applied materials & interfaces** 8:10093-7(2016).
- [89] Thorat ND, Bohara RA, Malgras V, Tofail SA, Ahamad T, **S. M. Alshehri**, Wu, K. C. W.; Yamauchi, Y. Multimodal Superparamagnetic Nanoparticles with Unusually Enhanced Specific Absorption Rate for Synergetic Cancer Therapeutics and Magnetic Resonance Imaging. **ACS applied materials & interfaces** 8 (23), 14656-14664 (2016).
- [90] Naushad M, Ahamad T, Sharma G, Ala'a H, Albadarin AB, Alam MM, **S. M. Alshehri**, Synthesis and characterization of a new starch/SnO₂ nanocomposite for efficient adsorption of toxic Hg²⁺ metal ion. **Chemical Engineering Journal** 300:306-16 (2016).
- [91] Kevin C.-W. Wu C-HK, Yi-Feng Lin, Kuo-Lun Tung, Yu-Heng Deng, Tansir Ahamad, **S. M. Alshehri**, Norihiro Suzuki, Yamauchi Y. Towards Acid-Tolerated Ethanol Dehydration: Chitosan-Based Mixed Matrix Membranes Containing Cyano-Bridged Coordination Polymer Nanoparticles. **Journal for Nanoscience and Nanotechnology** 16:4141(2016).
- [92] Jiang B, Ataee-Esfahani H, Li C, Ahamad T, **S. M. Alshehri**, Henzie, J.; Yamauchi, Y. Mesoporous Trimetallic PtPdRu Spheres as Superior Electrocatalysts. **Chemistry–A European Journal** 22:7174-8 (2016).
- [93] Guo Q, Sun H, Yang D, Qiao X, Chen J, Ahamad T, **S. M. Alshehri**, Dongge Ma, C70/Pentacene Organic Heterojunction as Charge Generator to Realize Highly Efficient Charge Carrier Injection in Organic Light-Emitting Diodes: Performance and Mechanism Analysis. **Advanced Materials Interfaces** 3 (14) (2016).
- [94] Darabdhara G, Boruah PK, Borthakur P, Hussain N, Das MR, Ahamad T, **S. M. Alshehri**, Malgras, V.; Wu, K. C. W.; Yamauchi, Y. Reduced graphene oxide nanosheets decorated with Au–Pd bimetallic alloy nanoparticles towards efficient photocatalytic degradation of phenolic compounds in water. **Nanoscale** 8:8276-87 (2016).
- [95] Cuiling Li BJ, Hungru Chen, Masataka Imura, Liwen Sang, Victor Malgras, Yoshio Bando, Tansir Ahamad, **S. M. Alshehri**, Satoshi Tominaka, Yusuke Yamauchi. Superior electrocatalytic activity of mesoporous Au film templated from diblock copolymer micelles. **Nano Research** 1-11 (2016).
- [96] Chu WC, Peng DR, Bastakoti BP, Pramanik M, Malgras V, Ahamad T, **S. M. Alshehri**, Yusuke Yamauchi. Co-templating Synthesis of Bimodal Mesoporous Silica for Potential Drug Carrier. **ChemistrySelect** 1339-46 (2016).
- [97] Bastakoti BP, Li Y, Guragain S, Pramanik M, **S. M. Alshehri**, Ahamad T, Liu, Z.; Yamauchi, Y. Synthesis of Mesoporous Transition-Metal Phosphates by Polymeric Micelle Assembly. **Chemistry–A European Journal** 22:7463-7 (2016).

- [98] **S. M. Alshehri**, Almuqati T, Almuqati N, Al-Farraj E, Alhokbany N, Ahamad T. Chitosan based polymer matrix with silver nanoparticles decorated multiwalled carbon nanotubes for catalytic reduction of 4-nitrophenol. **Carbohydrate Polymers** 151:135-43 (2016).
- [99] **S. M. Alshehri**, Al-Lohedan HA, Chaudhary AA, Al-Farraj E, Alhokbany N, Issa Z, et al. Delivery of ibuprofen by natural macroporous sporopollenin exine capsules extracted from Phoenix dactylifera L. **European Journal of Pharmaceutical Sciences** 88:158-65(2016).
- [100] **S. M. Alshehri**, Al-Lohedan HA, Al-Farraj E, Alhokbany N, Chaudhary AA, Ahamad T. Macroporous natural capsules extracted from Phoenix dactylifera L. spore and their application in oral drugs delivery. **International journal of pharmaceutics** 504:39-47 (2016).
- [101] **S. M. Alshehri**, Ahamad T, Aldalbahi A, Alhokbany N. Pyridylimine Cobalt (II) and Nickel (II) Complex Functionalized Multiwalled Carbon Nanotubes and Their Catalytic Activities for Ethylene Oligomerization. **Advances in Polymer Technology** 35(1) (2016).
- [102] **S. M. Alshehri**, Aldalbahi A, Al-Hajji AB, Chaudhary AA, in het Panhuis M, Alhokbany N, et al. Development of carboxymethyl cellulose-based hydrogel and nanosilver composite as antimicrobial agents for UTI pathogens. **Carbohydrate polymers** 138:229-36 (2016).
- [103] **S. M. Alshehri**, Aldalbahi A, Ahamad T, Alhokbany N. Synthesis and characterization of mackinawite nanocrystals (FeSm) and their application in recovery of aqueous Hg (II) solution. **Desalination and Water Treatment** 57:6594-603 (2016).
- [104] **S. M. Alshehri**, Ahamad T, Aldalbahi A, Alhokbany N. Pyridylimine Cobalt (II) and Nickel (II) Complex Functionalized Multiwalled Carbon Nanotubes and Their Catalytic Activities for Ethylene Oligomerization. **Advances in Polymer Technology** 35(1) (2016).
- [105] Alqadami AA, Naushad M, Abdalla MA, Ahamad T, Alothman ZA, **S. M. Alshehri**. Synthesis and characterization of Fe₃O₄@TSC nanocomposite: highly efficient removal of toxic metal ions from aqueous medium. **RSC Advances** 22679-89 (2016).
- [106] Alothman ZA, Ahamad T, Naushad M, **S. M. Alshehri**. Preparation of new thermoluminescent material (100– x) B₂O_{3-x}Li₂O:Cu²⁺ for sensing and detection of radiation. **Bulletin of Materials Science** 39:331-6 (2016).
- [107] Aldalbahi A, Feng P, Alhokbany N, Ahamad T, **S. M. Alshehri**., Synthesis, characterization, and CH₄-sensing properties of conducting and magnetic biopolymer nano-composites. **Journal of Environmental Chemical Engineering** 4 (3), 2841-2847 (2016).
- [108] Ahmed, J., Poltavets, V. V., Prakash, J., **S. M. Alshehri**, & Ahamad, T., Sol–gel synthesis, structural characterization and bifunctional catalytic activity of nanocrystalline delafossite CuGaO₂ particles. **Journal of Alloys and Compounds**, 688, 1157-1161 (2016).
- [109] X. Wang, C. Shi, Q. Guo, Z. Wu, D. Yang, X. Qiao, T. Ahamad, **S. M. Alshehri**, J. Chen and Dongge Ma, Highly efficient inverted organic light-

- emitting diodes using composite organic heterojunctions as electrode-independent injectors. *J. Mater. Chem. C*, 2016, 4, 8731.
- [110] Chen, J. E., Chiang, Y.-D., Ahamad, T., **S. M. Alshehri**, Yamauchi, Y., Malgras, V., & Wu, K. C.-W., Ethanol Dissolution-Assisted Synthesis of Ordered Mesostructured Titania Spheres. **Journal of Nanoscience and Nanotechnology**, **16(9)**, 9245-9249 (2016).
- [111] Liu, N.-L., Dutta, S., Salunkhe, R. R., Ahamad, T., S M. Alshehri, Yamauchi, Y., Wu, K. C.-W., ZIF-8 Derived, Nitrogen-Doped Porous Electrodes of Carbon Polyhedron Particles for High-Performance Electrosorption of Salt Ions. **Scientific Reports**, **6** (2016).
- [112] Naushad, M., Ahamad, T., Sharma, G., Ala'a, H., Albadarin, A. B., Alam, M. M., **S M. Alshehri**, Ghfar, A. A. Synthesis and characterization of a new starch/SnO₂ nanocomposite for efficient adsorption of toxic Hg²⁺ metal ion. **Chemical Engineering Journal**, 300, 306-316 (2016).
- [113] Pathania, D., Gupta, D., Ala'a, H., Sharma, G., Kumar, A., Naushad, M., **S. M. Alshehri**. Photocatalytic degradation of highly toxic dyes using chitosan-g-poly (acrylamide)/ZnS in presence of solar irradiation. **Journal of Photochemistry and Photobiology A: Chemistry**, 329, 61-68 (2016).
- [114] Pramanik, M., Malgras, V., Lin, J., **S. M. Alshehri**, Ahamad, T., Kim, J. H., & Yamauchi, Y., Electrochemical Property of Mesoporous Crystalline Iron Phosphonate Anode in Li-Ion Rechargeable Battery. **Journal of Nanoscience and Nanotechnology**, 16(9), 9180-9185 (2016).
- [115] Tang, J., Salunkhe, R. R., Zhang, H., Malgras, V., Ahamad, T., **S. M. Alshehri**, Kim, J. H., Bimetallic Metal-Organic Frameworks for Controlled Catalytic Graphitization of Nanoporous Carbons. **Scientific Reports**, **6** (2016).
- [116] Zhou, X., Yang, D., Ma, Dongge., Vadim, A., Ahamad, T., **S. M. Alshehri**. Ultrahigh Gain Polymer Photodetectors with Spectral Response from UV to Near Infrared Using ZnO Nanoparticles as Anode Interfacial Layer. **Advanced Functional Materials** 26, 6619-6626(2016).
- [117] Agustín Londonio, Belén Parodi , Raúl A. Gil, **S M. Alshehri**, Yusuke Yamauchi , Patricia Smichowski, A comparative study of two nanosubstrates for the on-line solid phase extraction of antimony by FI-HG-AAS, **Microchemical Journal** 128 235–241 (2016)
- [118] BP Bastakoti, Y Li, S Guragain, **S. M Alshehri**, MJA Shiddiky, Z Liu, K Shim, Yusuke Yamauchi, Formation of mesopores inside platinum nanospheres by using double hydrophilic block copolymers, **Materials Letters** 182, 190-193(2016).
- [119] K. Eid, H. Wang, V. Malgras, **S. M. Alshehri**, T. Ahamad, Y. Yamauchi, L. Wang, One-step solution-phase synthesis of bimetallic PtCo nanodendrites with high electrocatalytic activity for oxygen reduction reaction, **Journal of Electroanalytical Chemistry**, 789,250-255 (2016).
- [120] Chen C-T, Dutta S, Wang Z-Y, Chen JE, Ahamad T, **S. M. Alshehri**, Yamauchi, Y.; Lee, Y. F.; Wu, K. C. W., An unique approach of applying

- magnetic nanoparticles attached commercial lipase acrylic resin for biodiesel production. **Catalysis Today**, 278,330-334, (2016).
- [121] Deepak Pathania, Divya Gupta, H Ala'a, Gaurav Sharma, Amit Kumar, Mu Naushad, Tansir Ahamad, **S. M. Alshehri**, Photocatalytic degradation of highly toxic dyes using chitosan-g-poly (acrylamide)/ZnS in presence of solar irradiation, **Journal of Photochemistry and Photobiology A: Chemistry** 329, 61-68 (2016).
- [122] A. Aldalbahi, Peter Feng, Norah Alhokbany, Eida Al-Farraj, **S. M. Alshehri**, Tansir Ahamad, Synthesis and characterization of hybrid nanocomposites as highly-efficient conducting CH₄ gas sensor, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 173, 502–509 (2017).
- [123] , Cuiling Li, Jung Ho Kim, **S. M. Alshehri**, Tsuruo Nakayama and Yusuke Yamauchi, Three-Dimensional Super-Branched PdCu Nanoarchitectures Exposed on Controlled Crystal Facets, **Chemistry-A European Journal** 23 (1), 51-56 (2017).
- [124] Y Wang, D Yang, X Zhou, **S. M. Alshehri**, T Ahamad, A Vadim, D Ma, CH₃NH₃ PbI₃/C 60 heterojunction photodetectors with low dark current and high detectivity, **Organic Electronics** 42, 203-208, (2017).
- [125] Oveisi Hamid, M Adharvana Chari, Chi Van Nguyen, Jeffrey E Chen, **S. M. Alshehri**, Ekrem Yanmaz, Shahriar A Hossain, Yusuke Yamauchi, Kevin C-W Wu, ZnO-loaded mesoporous silica (KIT-6) as an efficient solid catalyst for production of various substituted quinoxalines. **Catalysis Communications** 90, 111-115 (2017).
- [126] J Ahmed, T Ahamad, **S. M. AlShehri**, Iron–Nickel Nanoparticles as Bifunctional Catalysts in Water Electrolysis, *ChemElectroChem*, 4 (5), 1222-1226 (2017).
- [127] Q. Guo, D. Yang, J. Chen, X. Qiao, T. Ahamad, **S.M. Alshehri**, D. Ma, C70/C70: pentacene/pentacene organic heterojunction as the connecting layer for high performance tandem organic light-emitting diodes: Mechanism investigation of electron injection and transport, **J Appl Phys** 121(11) 115502 (2017).
- [128] A.A. Alqadami, M. Naushad, M.A. Abdalla, T. Ahamad, Z.A. ALOthman, **S.M. Alshehri**, A.A. Ghfar, Efficient removal of toxic metal ions from wastewater using a recyclable nanocomposite: A study of adsorption parameters and interaction mechanism, **J Clean Prod** 156, 426-436 (2017).
- [129] T. Ahmad, I.H. Lone, S. Ansari, J. Ahmed, T. Ahamad, **S.M. Alshehri**, Multifunctional properties and applications of yttrium ferrite nanoparticles prepared by citrate precursor route, **Mater Design** 126, 331-338 (2017).
- [130] X. Qiao, P. Yuan, D. Ma, T. Ahamad, **S.M. Alshehri**, Electrical pumped energy up-conversion: A non-linear electroluminescence process mediated by triplet-triplet annihilation, **Org Electron**, 46,1-6 (2017).
- [131] C. Young, R. Salunkhe, **S.M. Alshehri**, T. Ahamad, Z. Huang, J. Henzie, Y. Yamauchi, High Energy Density Supercapacitors Composed of

- Nickel Cobalt Oxide Nanosheets on Nanoporous Carbon Nanoarchitectures, **Journal of Materials Chemistry A** 5, 11834-11839 (2017).
- [132] M Naushad, T Ahamad, BM Al-Maswari, AA Alqadami, **S.M. Alshehri**, Nickel ferrite bearing nitrogen-doped mesoporous carbon as efficient dsorbent for the removal of highly toxic metal ion from aqueous medium, **Chemical Engineering Journal**, 330, 1351-1360, (2017)
- [133] **S. M AlShehri**, J Ahmed, T Ahamad, BM Almaswari, A Khan, Efficient photodegradation of methylthioninium chloride dye in aqueous using barium tungstate nanoparticles, **Journal of Nanoparticle Research** 19 (8), 289, (2017)
- [134] Z. Dai, J. Lin, Q. Dong, Z. Yin, X. Zang, L. Shen, J. H. Kim, W. Huang, **S. M. Alshehri**, C. Young, Y. Yamauchi, X. Dong, Ni-Co Binary Hydroxide Nanotubes with Three-Dimensionally Structured Nanoflakes: Synthesis and Application as Cathode Materials for Hybrid Supercapacitors, **Chem. Eur. J.** 23, 10133 (2017).
- [135] DS Kim, MB Zakaria, MS Park, A Alowasheer, **S M Alshehri**, Y Yamauchi, H Kim, Dual-textured Prussian Blue nanocubes as sodium ion storage materials, **Electrochimica Acta** 240, 300-306, (2017)
- [136] Synthesis of a recyclable mesoporous nanocomposite for efficient removal of toxic Hg^{2+} from aqueous medium, T Ahamad, M Naushad, BM Al-Maswari, J Ahmed, ZA ALOthman, **S. M. Alshehri**, **Journal of Industrial and Engineering Chemistry**, 53, 368-275, (2017).
- [137] **S M AlShehri**, J Ahmed, AM Alzahrani, T Ahamad, Synthesis, characterization, and enhanced photocatalytic properties of NiWO 4 nanobricks, **New Journal of Chemistry** 41 (16), 8178-8186, (2017).
- [138] T Ahmad, R Phul, P Alam, IH Lone, M Shahazad, J Ahmed, T Ahamad, **S. M. Alshehri**, Dielectric, optical and enhanced photocatalytic properties of CuCrO2 nanoparticles, **RSC Advances** 7 (44), 27549-27557, (2017).
- [139] S Tanaka, RR Salunkhe, YV Kaneti, V Malgras, **S M Alshehri**, T Ahamad, y. Yamauchi, Prussian blue derived iron oxide nanoparticles wrapped in graphene oxide sheets for electrochemical supercapacitors, **RSC Advances** 7 (54), 33994-33999, (2017).
- [140] Y Wang, D Yang, X Zhou, D Ma, A Vadim, T Ahamad, **S M Alshehri**, Perovskite/Polymer Hybrid Thin Films for High External Quantum Efficiency Photodetectors with Wide Spectral Response from Visible to Near-Infrared Wavelengths, **Advanced Optical Materials**, 5, 12, 1700213, (2017).
- [141] F Zhao, Y Wei, H Xu, D Chen, T Ahamad, **S. M. Alshehri**, Q Pei, D Ma , Spatial exciton allocation strategy with reduced energy loss for high-efficiency fluorescent/phosphorescent hybrid white organic light-emitting diodes **Materials Horizons**, 4, 641-648, (2017).
- [142] AS Nugraha, C Li, J Bo, M Iqbal, **S M Alshehri**, T Ahamad, V Malgras, Y. Yamauchi, T. Asahi, Block-Copolymer-Assisted Electrochemical Synthesis of Mesoporous Gold Electrodes: Towards a Non-Enzymatic Glucose Sensor, **ChemElectroChem** 4(10) 2571-2576, (2017).

- [143] Z. Wu, L. Yu, F. Zhao, X. Qiao, J. Chen, F. Ni, C. Yang, T. Ahamad, **S.M. Alshehri**, D. Ma, Precise Exciton Allocation for Highly Efficient White Organic Light-Emitting Diodes with Low Efficiency Roll-Off Based on Blue Thermally Activated Delayed Fluorescent Exciplex Emission, **Adv Opt Mater** 5(20) (2017).
- [144] X. Wang, C. Shi, Q. Guo, J. Chen, X. Qiao, D. Ma, T. Ahamad, **S.M. Alshehri**, S.S. Bae, Highly efficient charge generation and electron injection of m-MTDATA/m-MTDATA: HAT-CN/HAT-CN organic heterojunction on ITO cathode for high efficiency inverted white organic light-emitting diodes, **J Appl Phys** 122(12) (2017) 125501.
- [145] M. Vinu, D.S. Raja, Y.-C. Jiang, T.-Y. Liu, Y.-Y. Xie, Y.-F. Lin, C.-C. Yang, C.-H. Lin, **S.M. Alshehri**, T. Ahamad, Effects of structural crystallinity and defects in microporous Al-MOF filled chitosan mixed matrix membranes for pervaporation of water/ethanol mixtures, **Journal of the Taiwan Institute of Chemical Engineers** (2017).
- [146] M. Naushad, T. Ahamad, B.M. Al-Maswari, A.A. Alqadami, **S.M. Alshehri**, Nickel ferrite bearing nitrogen-doped mesoporous carbon as efficient adsorbent for the removal of highly toxic metal ion from aqueous medium, **Chemical Engineering Journal** 330 (2017) 1351-1360.
- [147] Y. Li, H. Tan, T. Takei, M. Hossain, A. Shahriar, M. Islam, **S.M. Alshehri**, T. Ahamad, R.R. Salunkhe, S. Pradhan, A Simple Approach to Generate Hollow Carbon Nanospheres Loaded with Uniformly Dispersed Metal Nanoparticles, **European Journal of Inorganic Chemistry** 2017(45) (2017) 5413-5416.
- [148] K. Kani, V. Malgras, B. Jiang, M. Hossain, A. Shahriar, **S.M. Alshehri**, T. Ahamad, R.R. Salunkhe, Z. Huang, Y. Yamauchi, Periodically Arranged Arrays of Dendritic Pt Nanospheres Using Cage-Type Mesoporous Silica as a Hard Template, **Chemistry-An Asian Journal** (2017).
- [149] T.H. Chang, C. Young, M.H. Lee, R.R. Salunkhe, **S.M. Alshehri**, T. Ahamad, M. Islam, K.C.W. Wu, M. Hossain, A. Shahriar, Synthesis of MOF-525 Derived Nanoporous Carbons with Different Particle Sizes for Supercapacitor Application, **Chemistry-An Asian Journal** 12(21) (2017) 2857-2862.
- [150] S. Ansar, **S.M. Alshehri**, M. Abudawood, S.S. Hamed, T. Ahamad, Antioxidant and hepatoprotective role of selenium against silver nanoparticles, **International journal of nanomedicine** 12 (2017) 7789.
- [151] M.F. Alajmi, J. Ahmed, A. Hussain, T. Ahamad, N. Alhokbany, S. Amir, T. Ahmad, **S.M. Alshehri**, Green synthesis of Fe₃O₄ nanoparticles using aqueous extracts of Pandanus odoratissimus leaves for efficient bifunctional electro-catalytic activity, **Applied Nanoscience** 1-9, (2018).
- [152] A.M. Al-Enizi, T. Ahamad, A.B. Al-hajji, J. Ahmed, A.A. Chaudhary, **S.M. Alshehri**, Cellulose gum and copper nanoparticles based hydrogel as antimicrobial agents against urinary tract infection (UTI) pathogens, **Int J Biol Macromol** 109, 803-809 (2018).
- [153] A.M. Al-Enizi, M. Naushad, H. Ala'a, **S.M. Alshehri**, Z. Alothman, T. Ahamad, Synthesis and characterization of highly selective and sensitive

- Sn/SnO₂/N-doped carbon nanocomposite (Sn/SnO₂@ NGC) for sensing toxic NH₃ gas, **Chemical Engineering Journal** 345, 58-66 (2018).
- [154] E.S. Al-Farraj, A.N. Alhabarah, J. Ahmad, A.M. Al-Enizi, M. Naushad, M. Ubaidullah, **S.M. Alshehri**, T. Ahamad, Fabrication of hybrid nanocomposite derived from chitosan as efficient electrode materials for supercapacitor, **Int J Biol Macromol**, 120, 2271-2278 (2018).
- [155] A.A. Al-Kahtani, T. Almuqati, N. Alhokbany, T. Ahamad, M. Naushad, **S.M. Alshehri**, A clean approach for the reduction of hazardous 4-nitrophenol using gold nanoparticles decorated multiwalled carbon nanotubes, **Journal of Cleaner Production** 191, 429-435 (2018).
- [156] **S.M. Alshehri**, J. Ahmed, A. Khan, M. Naushad, T. Ahamad, Bifunctional Electrocatalysts (Co₉S₈@ NSC) Derived from a Polymer-metal Complex for the Oxygen Reduction and Oxygen Evolution Reactions, **ChemElectroChem** 5(2), 355-361 (2018).
- [157] **S. M. Alshehri**, A. Al-Fawaz, F. Al-Ghamdi, T. Ahamad, Synthesis, Characterization, and Antimicrobial Activity of Salisaldehyde-Based Terpolymeric Ligand and Its Transition Metal Complexes, **Advances in Polymer Technology** 37(2), 504-514 (2018).
- [158] R. Bhattacharjee, S. Tanaka, S. Moriam, M.K. Masud, J. Lin, **S.M. Alshehri**, T. Ahamad, R.R. Salunkhe, N.-T. Nguyen, Y. Yamauchi, Porous nanozymes: the peroxidase-mimetic activity of mesoporous iron oxide for the colorimetric and electrochemical detection of global DNA methylation, **Journal of Materials Chemistry B** 6(29) 4783-4791 (2018).
- [159] K. Kani, V. Malgras, B. Jiang, M.S.A. Hossain, **S.M. Alshehri**, T. Ahamad, R.R. Salunkhe, Z. Huang, Y. Yamauchi, Periodically Arranged Arrays of Dendritic Pt Nanospheres Using Cage-Type Mesoporous Silica as a Hard Template, **Chemistry—An Asian Journal** 13(1) 106-110 (2018).
- [160] J.H. Khan, J. Lin, C. Young, B.M. Matsagar, K.C. Wu, P.L. Dhepe, M.T. Islam, M. Rahman, L.K. Shrestha, **S.M. Alshehri**, High surface area nanoporous carbon derived from Bangladeshi jute, **Materials Chemistry and Physics**, 216, 491-495 (2018).
- [161] **S.M. Alshehri**, A.N. Alhabarah, J. Ahmed, M. Naushad, T. Ahamad, An efficient and cost-effective tri-functional electrocatalyst based on cobalt ferrite embedded nitrogen doped carbon, **J Colloid Interf Sci** 514, 1-9 (2018).
- [162] C. Shi, N. Sun, Z. Wu, J. Chen, T. Ahamad, **S.M. Alshehri**, D. Ma, Managing excitons for high performance hybrid white organic light-emitting diodes by using a simple planar heterojunction interlayer, **Applied Physics Letters** 112(2) 023301, (2018).
- [163] **Alshehri, S.M.**; Ahmed, J.*; Ahamad, T.; Alhokbany, N.; Arunachalam, P.; Al-Mayouf, A.M.; Ahmad, T., Synthesis, Characterization, Multifunctional Electrochemical (OGR/ORR/SCs) and Photodegradable Activities of ZnWO₄ Nanobricks, **Journal of Sol Gel Science and Technology**, 87, 137–146 (2018).
- [164] M. Vinu, D.S. Raja, Y.-C. Jiang, T.-Y. Liu, Y.-Y. Xie, Y.-F. Lin, C.-C. Yang, C.-H. Lin, **S.M. Alshehri**, T. Ahamad, Effects of structural crystallinity

- and defects in microporous Al-MOF filled chitosan mixed matrix membranes for pervaporation of water/ethanol mixtures, **J Taiwan Inst Chem E** 83, 143-151 (2018).
- [165] D. Yang, X. Zhou, D. Ma, A. Vadim, T. Ahamad, **S.M. Alshehri**, Near infrared to visible light organic up-conversion devices with photon-to-photon conversion efficiency approaching 30%, **Materials Horizons** 5(5) 874-882 (2018).
- [166] Ahmed, J.; Ahamad, T.; Ubaidullah, M.; Al-Enizi, AM; Alhabarah, AN; Alhokbany, N.; **Alshehri, SM**: rGO Supported NiWO₄ Nanocomposites for Hydrogen Evolution Reactions. **Materials Letters**, 240, 51-54 (2019).
- [167] C. Young, J. Lin, J. Wang, B. Ding, X. Zhang, **S.M. Alshehri**, T. Ahamad, R.R. Salunkhe, S.A. Hossain, J.H. Khan, Significant effect of pore sizes on energy storage in nanoporous carbon supercapacitors, **Chemistry–A European Journal** 24(23) 6127-6132 (2018).
- [168] Ahmed, J.; Ahamad, T; Alhokbany, N; Ahmad, T; Hussain, A; Al-Farraj, ES; **Alshehri, SM**, Molten Salts Derived Copper Tungstate Nanoparticles as Bifunctional Electro-catalysts for Electrolysis of Water and Supercapacitors. **ChemElectroChem**, 5, 3938-3945 (2018).
- [169] Alajmi, M.F.; Ahmed, J.; Husain, A.; Alhokbany, N.; Amir, S.; Ahmad, T.; **Alshehri, S.M.**, Green synthesis of Fe₃O₄ nanoparticles using aqueous extracts of Pandanus odoratissimus leaves for efficient bifunctional electro-catalytic activity. **Applied Nanoscience**, 8, 1427-1435 (2018).
- [170] T. Ahamad, M. Naushad, B.M. Al-Maswari, **S.M. Alshehri**, Fabrication of highly porous adsorbent derived from bio-based polymer metal complex for the remediation of water pollutants, **Journal of Cleaner Production** 208 1317-1326 (2019).
- [171] A.A. Al-Kahtani, **S.M. Alshehri**, M. Naushad, T. Ahamad, Fabrication of highly porous N/S doped carbon embedded with ZnS as highly efficient photocatalyst for degradation of bisphenol, **Int J Biol Macromol** 121, 415-423 (2019).
- [172] J.H. Khan, F. Marpaung, C. Young, J. Lin, M.T. Islam, **S.M. Alshehri**, T. Ahamad, N. Alhokbany, K. Ariga, L.K. Shrestha, Jute-derived microporous/mesoporous carbon with ultra-high surface area using a chemical activation process, **Microporous and Mesoporous Materials** 274 251-256 (2019).
- [173] T. Ahamad, M. Naushad, **S.M. Alshehri**, Ultra-fast spill oil recovery using a mesoporous lignin based nanocomposite prepared from date palm pits (Phoenix dactylifera L.), **Int J Biol Macromol** , 130, 139-147 (2019).
- [174] T. Ahamad, A.A. Chaudhary, M. Naushad, **S.M. Alshehri**, Fabrication of MnFe₂O₄ nanoparticles embedded chitosan-diphenylureaformaldehyde resin for the removal of tetracycline from aqueous solution, **International journal of biological macromolecules** 134, 80-188 (2019).
- [175] T. Ahamad, M. Naushad, A.N. Alhabarah, **S.M. Alshehri**, N/S doped highly porous magnetic carbon aerogel derived from sugarcane bagasse

- cellulose for the removal of bisphenol-A, **Int J Biol Macromol** 132, 1031-1038 (2019).
- [176] T. Ahamad, M.N. Ruksana, N. Alhokbany, **S.M. Alshehri**, AgNPs embedded N-doped highly porous carbon derived from chitosan based hydrogel as catalysts for the reduction of 4-nitrophenol, *Composites Part B: Engineering*, 106950 (2019).
- [177] H. Tan, J. Kim, J. Lin, C. Li, **S.M. Alshehri**, T. Ahamad, N. Alhokbany, Y. Bando, M. Zaman, M.S.A. Hossain, A facile surfactant-assisted synthesis of carbon-supported dendritic Pt nanoparticles with high electrocatalytic performance for the oxygen reduction reaction, **Microporous and Mesoporous Materials**, 280, 1-6 (2019).
- [178] J. Yao, S. Ying, X. Qiao, D. Yang, J. Chen, T. Ahamad, S.M. Alshehri, D. Ma, High efficiency and low roll-off all fluorescence white organic light-emitting diodes by the formation of interface exciplex, *Organic Electronics* 67, 72-78 (2019).
- [179] C. Zhao, D. Yan, T. Ahamad, S.M. Alshehri, D. Ma, High efficiency and low roll-off hybrid white organic light emitting diodes by strategically introducing multi-ultrathin phosphorescent layers in blue exciplex emitter, *Journal of Applied Physics* 125, 045501 (2019).
- [180] Ahmad, T.; Phul, R.; Farooq, U.; Ahmed, J.; **Alshehri, SM**, Electrocatalytic and Enhanced Photocatalytic Applications of Sodium Niobate Nanoparticles Developed by Citrate Precursor Route. **Scientific Reports**, 9, 4488 (2019).
- [181] J. Ahmed, M. Ubaidullah, T. Ahmad, N. Alhokbany, S.M. Alshehri, Synthesis of Graphite Oxide/Cobalt Molybdenum Oxide Hybrid Nanosheets for Enhanced Electrochemical Performance in Supercapacitors and the Oxygen Evolution Reaction, **ChemElectroChem** 6 , 2524-2530 (2019).
- [182] T. Ahamad, M. Naushad, B.M. Al-Maswari, **S.M. Alshehri**, Fabrication of highly porous adsorbent derived from bio-based polymer metal complex for the remediation of water pollutants, *Journal of cleaner production*, 208 (2019) 1317-1326.
- [183] J. Ahmed, T. Ahamad, M. Ubaidullah, A.M. Al-Enizi, A.N. Alhabarah, N. Alhokbany, **S.M. Alshehri**, rGO supported NiWO₄ nanocomposites for hydrogen evolution reactions, *Materials Letters*, 240 (2019) 51-54.
- [184] N. Alhokbany, T. Ahamad, M. Naushad, **S.M. Alshehri**, Feasibility of toxic metal removal from aqueous medium using Schiff-base based highly porous nanocomposite: Adsorption characteristics and post characterization, *Journal of Molecular Liquids*, 294 (2019) 111598.
- [185] **S.M. Alshehri**, M. Naushad, T. Ahamad, N. Alhokbany, T. Ahmad, J. Ahmed, Polymeric metal complex-derived nitrogen-doped carbon-encapsulated alpha-Fe₂O₃ (NCF) nanocomposites as highly efficient adsorbent for the removal of Cd²⁺ ion from aqueous medium, *Desalination and Water Treatment*, 162 (2019) 303-312.

- [186] S. Haseena, S. Shanavas, J. Duraimurugan, T. Ahamad, **S. Alshehri**, R. Acevedo, N. Jayamani, Investigation on photocatalytic and antibacterial ability of green treated copper oxide nanoparticles using Artabotrys Hexapetalus and Bambusa Vulgaris plant extract, *Materials Research Express*, 6 (2019) 125064.
- [187] B. Jiang, J. Kim, Y. Guo, K.C. Wu, **S.M. Alshehri**, T. Ahamad, N. Alhokbany, J. Henzie, Y. Yamachi, Efficient oxygen evolution on mesoporous IrO_x nanosheets, *Catalysis Science & Technology*, 9 (2019) 3697-3702.
- [188] B. Jiang, J. Kim, Y. Guo, K.C. Wu, **S.M. Alshehri**, T. Ahamad, N. Alhokbany, J. Henzie, Y. Yamauchi, Correction: Efficient oxygen evolution on mesoporous IrO_x nanosheets, *Catalysis Science & Technology*, 9 (2019) 4146-4146.
- [189] N. Khalaf, T. Ahamad, M. Naushad, N. Al-hokbany, S.I. Al-Saeedi, S. Almotairi, **S.M. Alshehri**, Chitosan polymer complex derived nanocomposite (AgNPs/NSC) for electrochemical non-enzymatic glucose sensor, *International journal of biological macromolecules*, (2019).
- [190] H. Lim, J. Kim, K. Kani, M.K. Masud, H. Park, M. Kim, **S.M. Alshehri**, T. Ahamad, N. Alhokbany, J. Na, Designed Patterning of Mesoporous Metal Films Based on Electrochemical Micelle Assembly Combined with Lithographical Techniques, *Small*, (2019) 1902934.
- [191] T. Ahamad, M. Naushad, S.I. Al-Saeedi, S. Almotairi, **S.M. Alshehri**, Fabrication of MoS₂/ZnS embedded in N/S doped carbon for the photocatalytic degradation of pesticide, *Materials Letters* 263 (2020).
- [192] T. Ahamad, M. Naushad, S.I. Al-Saeedi, **S.M. Alshehri**, N/S-doped carbon embedded with AgNPs as a highly efficient catalyst for the reduction of toxic organic pollutants, *Materials Letters* 264 (2020).
- [193] T. Ahamad, M. Naushad, T. Al-Shahrani, N. Al-hokbany, **S.M. Alshehri**, Preparation of chitosan based magnetic nanocomposite for tetracycline adsorption: Kinetic and thermodynamic studies, *International Journal of Biological Macromolecules* 147 (2020) 258-267.
- [194] T. Ahamad, M. Naushad, **S.M. Alshehri**, Fabrication of CoP based nanocomposite as an electrocatalyst for oxygen- and hydrogen-evolving energy conversion reactions, *Materials Letters* 278 (2020).
- [195] T. Ahamad, M. Naushad, **S.M. Alshehri**, Fabrication of magnetic polymeric resin for the removal of toxic metals from aqueous medium: Kinetics and adsorption mechanisms, *Journal of Water Process Engineering* 36 (2020).
- [196] T. Ahamad, M. Naushad, Y. Alzaharani, **S.M. Alshehri**, Photocatalytic degradation of bisphenol-A with g-C₃N₄/MoS₂-PANI nanocomposite: Kinetics, main active species, intermediates and pathways, *Journal of Molecular Liquids* 311 (2020).
- [197] T. Ahamad, M. Naushad, R. Hassan Mousa, N. Khalaf, **S.M. Alshehri**, Synthesis and characterization cobalt phosphate embedded with N doped carbon for water splitting ORR and OER, *Journal of King Saud University - Science* (2020).
- [198] T. Ahamad, M. Naushad, R.H. Mousa, **S.M. Alshehri**, Fabrication of starch-salicylaldehyde based polymer nanocomposite (PNC) for the removal

- of pollutants from contaminated water, **International Journal of Biological Macromolecules** 165 (2020) 2731-2738.
- [199] T. Ahamad, M. Naushad, M. Ubaidullah, Y. Alzharani, **S.M. Alshehri**, Birnessite-type manganese dioxide nanoparticles embedded with nitrogen-doped carbon for high-performance supercapacitor, **Journal of Energy Storage** 32 (2020).
- [200] J. Ahmed, N. Alhokbany, A. Husain, T. Ahmad, M.A.M. Khan, **S.M. Alshehri**, Synthesis, characterization, and significant photochemical performances of delafossite AgFeO_2 nanoparticles, **Journal of Sol-Gel Science and Technology** 94 (2020) 493-503.
- [201] J. Ahmed, N. Alhokbany, M. Ubaidullah, S. Mutehri, M.A.M. Khan, **S.M. Alshehri**, Synthesis of double perovskite $\text{La}_2\text{MnNiO}_6$ nanoparticles as highly efficient oxygen evolution electro-catalysts, **Ceramics International** 46 (2020) 20038-20044.
- [202] J. Ahmed, M. Ubiadullah, M.A.M. Khan, N. Alhokbany, **S.M. Alshehri**, Significant recycled efficiency of multifunctional nickel molybdenum oxide nanorods in photo-catalysis, electrochemical glucose sensing and asymmetric supercapacitors, *Materials Characterization* (2020).
- [203] A.M. Al-Enizi, M. Ubaidullah, J. Ahmed, H. Alrobei, **S.M. Alshehri**, Copper nickel@reduced graphene oxide nanocomposite as bifunctional electro-catalyst for excellent oxygen evolution and oxygen reduction reactions, **Materials Letters** 260 (2020).
- [204] N. Alhokbany, J. Ahmed, M. Ubaidullah, S. Mutehri, M.A.M. Khan, T. Ahamad, **S.M. Alshehri**, Cost-effective synthesis of NiCo_2O_4 @nitrogen-doped carbon nanocomposite using waste PET plastics for high-performance supercapacitor, **Journal of Materials Science: Materials in Electronics** 31 (2020) 16701-16707.
- [205] N.S. Alhokbany, N. Mohammed Qadri, J. Ahmed, T. Ahamad, **S.M. Alshehri**, Flux synthesis, crystal structure and electrochemical properties of $\text{Na}_2\text{La}_2\text{P}_4\text{O}_{12}$ material for supercapacitors, **Materials Letters** 272 (2020).
- [206] N.S. Alhokbany, R. Mousa, M. Naushad, **S.M. Alshehri**, T. Ahamad, Fabrication of Z-scheme photocatalysts $\text{g-C}_3\text{N}_4/\text{AgPO}_4/\text{chitosan}$ for the photocatalytic degradation of ciprofloxacin, **International Journal of Biological Macromolecules** 164 (2020) 3864-3872.
- [207] N.S. Alhokbany, M. Naushad, V. Kumar, S. Al hatim, **S.M. Alshehri**, T. Ahamad, Self-nitrogen doped carbons aerogel derived from waste cigarette butts (cellulose acetate) for the adsorption of BPA: Kinetics and adsorption mechanisms, **Journal of King Saud University - Science** 32 (2020) 3351-3358.
- [208] P. Bhanja, Y. Kim, B. Paul, J. Lin, **S.M. Alshehri**, T. Ahamad, Y.V. Kaneti, A. Bhaumik, Y. Yamauchi, Facile Synthesis of Nanoporous Transition Metal-Based Phosphates for Oxygen Evolution Reaction, **ChemCatChem** 12 (2020) 2091-2096.
- [209] S.S. Chen, P.C. Han, W.K. Kuok, J.Y. Lu, Y. Gu, T. Ahamad, **S.M. Alshehri**, H. Ayalew, H.H. Yu, K.C.W. Wu, Synthesis of mof-525/pedot composites as microelectrodes for electrochemical sensing of dopamine, **Polymers** 12 (2020) 1-17.
- [210] S.S. Chen, C. Hu, C.H. Liu, Y.H. Chen, T. Ahamad, **S.M. Alshehri**, P.H. Huang, K.C.W. Wu, De Novo synthesis of platinum-nanoparticle-encapsulated UiO-66-NH_2 for photocatalytic thin film fabrication with

- enhanced performance of phenol degradation, **Journal of Hazardous Materials** 397 (2020).
- [211] S. Haseena, S. Shanavas, J. Duraimurugan, T. Ahamad, **S.M. Alshehri**, R. Acevedo, N. Jayamani, Study on photocatalytic and antibacterial properties of phase pure Fe₂O₃ nanostructures synthesized using Caralluma Fimbriata and Achyranthes Aspera leaves, **Optik** 203 (2020).
- [212] A. Kathalingam, S. Valanarasu, T. Ahamad, **S.M. Alshehri**, H.S. Kim, Spray pressure variation effect on the properties of CdS thin films for photodetector applications, **Ceramics International** (2020).
- [213] N. Khalaf, T. Ahamad, M. Naushad, N. Al-hokbany, S.I. Al-Saedi, S. Almotairi, **S.M. Alshehri**, Chitosan polymer complex derived nanocomposite (AgNPs/NSC) for electrochemical non-enzymatic glucose sensor, **International Journal of Biological Macromolecules** 146 (2020) 763-772.
- [214] Z.U.H. Khan, N.S. Shah, J. Iqbal, A.U. Khan, M. Imran, **S.M. Alshehri**, N. Muhammad, M. Sayed, N. Ahmad, A. Kousar, M. Ashfaq, F. Howari, K. Tahir, Biomedical and photocatalytic applications of biosynthesized silver nanoparticles: Ecotoxicology study of brilliant green dye and its mechanistic degradation pathways, **Journal of Molecular Liquids** 319 (2020).
- [215] Y. Li, T. Park, M. Kim, H. Xie, J.W. Yi, J. Li, **S.M. Alshehri**, T. Ahamad, J. Na, Y. Yamauchi, Electrophoretic Deposition of Binder-Free MOF-Derived Carbon Films for High-Performance Microsupercapacitors, **Chemistry - A European Journal** 26 (2020) 10283-10289.
- [216] H. Lim, T. Nagaura, M. Kim, K. Kani, J. Kim, Y. Bando, **S.M. Alshehri**, T. Ahamad, J. You, J. Na, Y. Yamauchi, Electrochemical preparation system for unique mesoporous hemisphere gold nanoparticles using block copolymer micelles, **RSC Advances** 10 (2020) 8309-8313.
- [217] T. Lu, X. Xu, S. Zhang, L. Pan, Y. Wang, **S.M. Alshehri**, T. Ahamad, M. Kim, J. Na, M.S.A. Hossain, J.G. Shapter, Y. Yamauchi, High-performance capacitive deionization by lignocellulose-derived eco-friendly porous carbon materials, **Bulletin of the Chemical Society of Japan** 93 (2020) 1014-1019.
- [218] S. Munkaila, J. Bentley, K. Schimmel, T. Ahamad, **S.M. Alshehri**, B.P. Bastakoti, Polymer directed synthesis of NiO nanoflowers to remove pollutant from wastewater, **Journal of Molecular Liquids** (2020).
- [219] K. Perumal, S. Shanavas, A. Karthigeyan, T. Ahamad, **S.M. Alshehri**, P. Murugakoothan, Hydrothermal assisted precipitation synthesis of highly stable C₃N₄/BiOBr/CdS photocatalyst with enhanced visible light photocatalytic degradation of tetracycline, **Diamond and Related Materials** 110 (2020).
- [220] R. Phul, M. Perwez, J. Ahmed, M. Sardar, **S.M. Alshehri**, N. Alhokbany, M.A. Majeed Khan, T. Ahmad, Efficient multifunctional catalytic and sensing properties of synthesized ruthenium oxide nanoparticles, **Catalysts** 10 (2020) 1-12.
- [221] S. Shanavas, T. Ahamad, **S.M. Alshehri**, R. Acevedo, P. Munusamy Anbarasan, Hydrothermal Assisted Synthesis of ZnFe₂O₄ Embedded g-C₃N₄ Nanocomposite with Enhanced Charge Transfer Ability for Effective Removal of Nitrobenzene and Cr(VI), **ChemistrySelect** 5 (2020) 5117-5127.
- [222] S. Shanavas, T. Ahamad, **S.M. Alshehri**, A. Sultan, R. Acevedo, P.M. Anbarasan, Development of high-performance fiber optic gas sensor based

- rice-like CeO₂/MWCNT nanocomposite synthesized by facile hydrothermal route, **Optics and Laser Technology** 123 (2020).
- [223] A. Sultan, S. Shajahan, T. Ahamad, **S.M. Alshehri**, N. Sajjad, N. Mehr un, M.H.U. Rehman, L. Torun, M. Khalid, R. Acevedo, Silica-supported heterogeneous catalysts-mediated synthesis of chalcones as potent urease inhibitors: in vitro and molecular docking studies, **Monatshefte fur Chemie** 151 (2020) 123-133.
- [224] S. Thanikaikarasan, T. Mahalingam, T. Ahamad, **S.M. Alshehri**, Role of substrate on film thickness, structural, compositional and magnetic properties of CoNi alloy thin films by low temperature electrodeposition technique, **Journal of Saudi Chemical Society** (2020).
- [225] M. Thirumoorthi, T. Ahamad, **S.M. Alshehri**, Influence of aluminum doping on microstructure, optical and electrical properties of c axis oriented zinc oxide nano films prepared by nebulizer spray pyrolysis technique, **Applied Physics A: Materials Science and Processing** 126 (2020).
- [226] N.L. Torad, J. Kim, M. Kim, H. Lim, J. Na, **S.M. Alshehri**, T. Ahamad, Y. Yamauchi, M. Eguchi, B. Ding, X. Zhang, Nanoarchitected porous carbons derived from ZIFs toward highly sensitive and selective QCM sensor for hazardous aromatic vapors, **Journal of Hazardous Materials** (2020).
- [227] M. Ubaidullah, J. Ahmed, T. Ahamad, S.F. Shaikh, **S.M. Alshehri**, A.M. Al-Enizi, Hydrothermal synthesis of novel nickel oxide@nitrogenous mesoporous carbon nanocomposite using costless smoked cigarette filter for high performance supercapacitor, **Materials Letters** 266 (2020).
- [228] C. Van Nguyen, J.R. Boo, C.H. Liu, T. Ahamad, **S.M. Alshehri**, B.M. Matsagar, K.C.W. Wu, Oxidation of biomass-derived furans to maleic acid over nitrogen-doped carbon catalysts under acid-free conditions, **Catalysis Science and Technology** 10 (2020) 1498-1506.
- [229] C. Van Nguyen, B.M. Matsagar, T. Ahamad, **S.M. Alshehri**, W.H. Chiang, K.C.W. Wu, Unraveling the highly selective nature of silver-based metal-organic complexes for the detection of metal ions: The synergistic effect of dicarboxylic acid linkers, **Journal of Materials Chemistry C** 8 (2020) 5051-5057.
- [230] H.Y. Wu, S.S. Chen, W. Liao, W. Wang, M.F. Jang, W.H. Chen, T. Ahamad, **S.M. Alshehri**, C.H. Hou, K.S. Lin, T. Charinpanitkul, K.C.W. Wu, Assessment of agricultural waste-derived activated carbon in multiple applications, **Environmental Research** 191 (2020).
- [231] Y.R. Wulandari, S.S. Chen, G.C. Hermosa, M.S.A. Hossain, Y. Yamauchi, T. Ahamad, **S.M. Alshehri**, K.C.W. Wu, H.S. Wu, Effect of N₂ flow rate on kinetic investigation of lignin pyrolysis, **Environmental Research** 190 (2020).
- [232] Y. Yang, Q. Lin, B. Ding, J. Wang, V. Malgras, J. Jiang, Z. Li, S. Chen, H. Dou, **S.M. Alshehri**, T. Ahamad, J. Na, X. Zhang, Y. Yamauchi, Lithium-ion capacitor based on nanoarchitected polydopamine/graphene composite anode and porous graphene cathode, **Carbon** 167 (2020) 627-633.
- [233] Y. Yin, S. Fu, S. Zhou, Y. Song, L. Li, M. Zhang, J. Wang, P. Mariyappan, **S.M. Alshehri**, T. Ahamad, Y. Yamauchi, Efficient and Stable Ideal Bandgap Perovskite Solar Cell Achieved by a Small Amount of Tin Substituted Methylammonium Lead Iodide, **Electronic Materials Letters** 16 (2020) 224-230.

- [234] S. Zhang, W. Xia, Q. Yang, Y. Valentino Kaneti, X. Xu, **S.M. Alshehri**, T. Ahamad, M.S.A. Hossain, J. Na, J. Tang, Y. Yamauchi, Core-shell motif construction: Highly graphitic nitrogen-doped porous carbon electrocatalysts using MOF-derived carbon@COF heterostructures as sacrificial templates, **Chemical Engineering Journal** 396 (2020).
- [235] S. Zhang, Q. Yang, X. Xu, X. Liu, Q. Li, J. Guo, N.L. Torad, **S.M. Alshehri**, T. Ahamad, M.S.A. Hossain, Y.V. Kaneti, Y. Yamauchi, Assembling well-arranged covalent organic frameworks on MOF-derived graphitic carbon for remarkable formaldehyde sensing, **Nanoscale** 12 (2020) 15611-15619.
- [236] J. Zheng, B. Sun, X.X. Wang, Z.X. Cai, X. Ning, **S.M. Alshehri**, T. Ahamad, X.T. Xu, Y. Yamauchi, Y.Z. Long, Magnetic-electrospinning synthesis of γ -Fe₂O₃/nanoparticle-embedded flexible nanofibrous films for electromagnetic shielding, **Polymers** 12 (2020).
- [237] J. Ahmed, M.A. Majeed Khan, **S.M. Alshehri**, Zinc molybdenum oxide sub-micron plates as electro-catalysts for hydrogen evolution reactions in acidic medium, **Materials Letters** 284 (2021).
- [238] S. Gandhi, **S.M. Alshehri**, Molecular stability of the rabbit and chicken egg yolk immunoglobulins, **Frontiers in bioscience** (Elite edition) 13 (2021) 185-194.
- [239] S.A. Khan, N.Z. Khan, I. Mehmood, M. Rauf, B. Dong, M. Kiani, J. Ahmed, **S.M. Alshehri**, J. Zhu, S. Agathopoulos, Broad band white-light-emitting Y₅Si₃O₁₂/N:Ce³⁺/Dy³⁺ oxonitridosilicate phosphors for solid state lighting applications, **Journal of Luminescence** 229 (2021).
- [240] S. Shanavas, T. Ahamad, **S.M. Alshehri**, R. Acevedo, P.M. Anbarasan, A facile microwave route for fabrication of NiO/rGO hybrid sensor with efficient CO₂ and acetone gas sensing performance using clad modified fiber optic method, **Optik** 226 (2021).
- [241] Alshehri, SM.; Ahamad, T.; Alhokbany, N.; Husaain, A.; Khan, A.; Ahmed, J. Synthesis, Characterization and Enhanced Photocatalytic Performances of Delafossite AgFeO₂ (DAFO) nanoparticles. **Materials Chemistry and Physics** (Submitted, 2020)
- [242] Ahmed, J.; Husaain, A.; Alhokbany, N.; Alshehri, **SM**. Excellent Stability, Recyclable Nature and High Photocatalytic Performance of Graphite Oxide/Fe₃O₄ Nanocomposites. Desalination and water treatment (**submitted 2020**)
- [243] Ahmad, T.; Phul, R.; Umar; Perwez; Sardar, M.; Alhokbany, N.; Ahmed, J.; Alshehri, SM. Ultrafine Ruthenium Oxide Nanoparticles as an Efficient Catalyst for Water Redox Reaction (OER/ORR) and H₂O₂ Detection. **New Journal of Chemistry** (**Submitted 2020**).
- [244] Ahmad, T.; Phul, R.; Sardar, M.; Ahmed, J.; Alshehri, SM. Synthesis and Efficient Electrochemical Properties of Iron Oxide Nanocubes for Clean Energy, **ACS Omega** (**Submitted 2020**)
- [245] T. Ahamad, M. Naushad, Alhokbany, N., **S.M. Alshehri**, Starch/ZnO nanocomposite as a high performance adsorbent for the removal of toxic Pb²⁺

metal ion: synthesis, characterization and applications. Carbohydrates
polymers (**submitted 2020**)