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EDUCATION

University of Strathclyde, Glasgow, UK
PhD, Feb 2015
Thesis: Synthesis and characterisation of silica adsorption platforms for use in environmental remediation.

Loughborough University, Leicestershire, UK
Master degree (MSc), September 2010
Thesis: Investigation Into the formation of Multi- Metal Ligand Complexes at high pH

King Saud University, Riyadh, Saudi Arabia
Bachelor degree, Feb 2007

ACADEMIC APPOINTMENTS

Associate Professor in Material Science

Since Oct 2021

Lecturer in Chemistry Department

Mar 2015 – Jun 2015

Teaching Associate in General Chemistry

Apr 2007 – Aug 2008

RESEARCH FOCUS

- Development and design of innovative nanoscale materials for cutting-edge application technologies.
- Addressing contemporary challenges in healthcare, environmental conservation, and energy sustainability.

GRANT & FUNDING

Principal Investigator (PI), King Abdulaziz City for Science and Technology, 2017. *Project*: Development of a colorimetric biosensor employing gold nanoparticles and a DNA aptamer for the detection of vitamin D.

CONFERENCE PARTICIPATIONS

- **Sensing in Water Conference**, Royal Society of Chemistry, Nottingham Belfry Hotel, Nottingham, UK, 21st September 2011.
- **6th Saudi Scientific International Conference**, London, UK, 11th October 2012.
- **12th International Conference on Materials Chemistry (MC12)**, Royal Society of Chemistry, York, UK, 22nd July 2015.

PROFESSIONAL DEVELOPMENT & TRAINING

- **Workshop**: "Fundamentals and Application of Nano Technology", presented by Prof. Mohammed Sami El-Shall, King Saud University, 18th May 2008.
- **Workshop**: "Professional Development Diploma in Project Management", March 2012.
- **Technical Experience**: Operator for BET, ICP, and SEM instruments, University of Strathclyde, 2012-2013.
- **Workshop**: "Question Writing Techniques", organized by the Department of Professional Examinations, National Centre for Assessment in Higher Education, 11-12 Jan 2017.
- **Workshop**: "Writing Technical and Financial Training Proposals", King Abdullah Institute for Research & Consulting Studies (KAI), 09-11 Aug 2022.

ADMINISTRATIVE & COMMITTEE ROLES:

- **DEPUTY DEAN**: Research Affairs, King Abdullah Institute For Nanotechnology, Since 2020.
- **Head**: Graduate Studies Unit, College Of Science, 2016-2017.
- **Coordinator**: Analytical Chemistry, Department Of Chemistry, Since 2018.
- **Committee Chairman**: Public Relations And Community Partnership, Since 2017.
- **Committee Member**: Accreditation For Postgraduate Studies, Chemistry Department, 2017-2019.

PROFESSIONAL MEMBERSHIPS:

- MEMBER, SAUDI CHEMICAL SOCIETY, SINCE 2016.
- MEMBER, ROYAL SOCIETY OF CHEMISTRY, SINCE 2012.

Publications:

Alotaibi, Khalid M., *Anfal A. Alkhamees, A. Yacine Badjah Hadj Ahmed, Ahmad Aqel, and Abdullah Mohammed Alswieleh. "Innovative Silica Acorn Core–Shell Nanostructures: Morphological Control and Applications in Chromatography." Langmuir (2024).*

Ahmed, Ahmed Yacine Badjah Hadj, ***Khadejah Dhafer Yahya Otaif,*** *Zeid Abdullah Alothman, and* ***Khalid Mohammed Nasser Alotaibi****. "Method of preparing a capillary column including in situ formation of a metal-organic framework stationary phase."* ***U.S. Patent*** *11,998,892, issued June 4, 2024.*

Fotina, Natalya V., Yuliya R. Serazetdinova, Daria E. Kolpakova, Lyudmila K. Asyakina, Victor V. Atuchin, ***Khalid M. Alotaibi****, Gaurav Mudgal, and Alexander Yu Prosekov. "Enhancement of wheat growth by plant growth-stimulating bacteria during phytopathogenic inhibition." Biocatalysis and Agricultural Biotechnology (2024): 103294.*

Alfhaid, Latifah H., Hind K. Alshammeri, Shatha S. Lahmadi, Abeer M. Beagan, Khalid M. Alotaibi, Mohammed S. Almeateq, and Abdullah M. Alswieleh. "Effective and fast removal of ionic dyes from contaminated water using multi-walled carbon nanotubes decorated with polyelectrolyte brushes." Polymers for Advanced Technologies 35, no. 6 (2024): e6480.

Tahir, F., Javed, M., Mansoor, S., Fatima, I., Iqbal, S., Mahmood, S., Qamar, M.A., Nadeem, S., Alotaibi, K.M. and Alshalwi, M., 2024. Fabrication and photocatalytic evaluation of Cr-doped-ZnO/Sg-C3N4 nanocomposite: exploiting the synergistic effect for efficient environmental remediation. Journal of Materials Science: Materials in Electronics, 35(17), p.1162.

Umar, M., Ajaz, H., Javed, M., Bahadur, A., Iqbal, S., Mahmood, S., Sarwar, A., Alotaibi, K.M. and Alshalwi, M., 2024. Comparative investigation of tellurium-doped transition metal nanoparticles (Zn, Sn, Mn): Unveiling their superior photocatalytic and antibacterial activity. Luminescence, 39(6), p.e4799.

Mahmood, S., Riaz, M.S., Ammar, M., Wang, Z., Iqbal, M.J., Ashraf, G.A., Afshan, N., Hassan, N., Bahadur, A., Iqbal, S. and Saad, M., 2024. Enhancing selective nitrate-to-ammonia electrocatalysis with high-performing Ni2P embedded nitrogen phosphide doped carbon (NPC) deposited on CP: Unprecedented performance and stability. International Journal of Hydrogen Energy, 70, pp.315-324.

Saher, N.U., Javed, M., Bahadur, A., Iqbal, S., Sohail, M.T., Mahmood, S., Alotaibi, K.M. and Alshalwi, M., 2024. Boosting highly effective photocatalytic activity through g-C3N4 coupled Al doped zinc ferrite nanoparticles: Maximizing dye degradation kinetics. Materials Chemistry and Physics, 320, p.129472.

Riaz, T., Azam, R., Shahzadi, T., Shahid, S., Mansoor, S., Javed, M., Bahadur, A., Iqbal, S., Mahmood, S., Alotaibi, K.M. and Alshalwi, M., 2024. Carbon dots and nitrogen-doped carbon dots-metal oxide nanocomposites: robust agents for effective sensing of ions. Journal of Materials Science: Materials in Electronics, 35(13), p.940.

Rubab, R., Mansoor, S., Javed, M., Hamza, A., Bahadur, A., Iqbal, S., Mahmood, S., Qamar, M.A., Shoaib, M., Alotaibi, K.M. and Alshalwi, M., 2024. Harnessing solar power for enhanced photocatalytic degradation of coloured pollutants using novel Mg-doped-ZnFe2O4/S@ g-C3N4 heterojunction: A facile hydrothermal synthesis approach. Luminescence, 39(5), p.e4758.

Alfhaid, L.H., Alshammeri, H.K., Lahmadi, S.S., Beagan, A.M., Alotaibi, K.M., Almeateq, M.S. and Alswieleh, A.M., 2024. Effective and fast removal of ionic dyes from contaminated water using multi-walled carbon nanotubes decorated with polyelectrolyte brushes. Polymers for Advanced Technologies, 35(6), p.e6480.

Lahmadi, Shatha, Salman Alamery, Abeer Beagan, Khalid Alotaibi, and Abdullah Alswieleh. "Advanced hybrid silica nanoparticles with pH-responsive diblock copolymer brushes: optimized design for controlled doxorubicin loading and release in cancer therapy." RSC advances 14, no. 13 (2024): 8819-8828.

Nadeem, Muhammad, Adeela Ulfat, Anuj Kumar, Moazzam H. Bhatti, Faiz Rabani, Uzma Yunus, Muhammad Aamir, Muhammad Sher, Khalid M. Alotaibi, and Ghulam Yasin. "Synergistic catalytic effect of fluorine coordination in defects engineered nitrogen-doped 3D-Hierarchical Zn polymer-derived carbon as efficient bifunctional electrocatalysts." International Journal of Hydrogen Energy 53 (2024): 457-467.

Venkatesh, Krishnan, Balamurugan Muthukutty, Daeho Lee, Kavitha Shanmugavel, Matar Alshalwi, Khalid M. Alotaibi, and Sayee Kannan Ramaraj. "Synthesis of Graphitic Carbon Nitride-Enhanced Manganese Oxide Microspheres for Ultra-Sensitive Electrochemical Detection of Mercury (II) in Environmental Water Sample." Journal of Industrial and Engineering Chemistry (2024).

uz Zaman, Fakhr, Anuj Kumar, Ghulam Yasin, Felix Ofori Boakye, Fawad Muhammad, Sikandar Iqbal, Khalid M. Alotaibi, Linrui Hou, and Changzhou Yuan. "Enhanced photocatalytic degradation of organic dyes by carbon quantum dots-ZnFe2O4 composites." Journal of Alloys and Compounds (2024): 173860.

Zaib, Sumera, Rubina Munir, Imtiaz Khan, Noman Javid, Rahila Huma, Uzma Mustafa, Nehal Rana et al. "Supramolecular Networks Featuring Diverse Array of Noncovalent Interactions in Crystals of Hydrazinylidene-Benzothiazinediones: X-ray Crystallographic, DFT and Biochemical Analysis." Journal of Molecular Structure (2024): 137840.

Ain, Qurat Ul, Tanzeela Fazal, Shahid Iqbal, Sajid Mahmood, Bushra Ismail, Mazloom Shah, Asad Muhammad Khan, Ali Bahadur, Khalid M. Alotaibi, and Matar Alshalwi. "Novel yellowish-green single-phased spinel Mg1− xBaxAl2O4: Mn2+ phosphor (s) for color rendering white-light-emitting diodes." Luminescence 39, no. 3 (2024): e4724.

Ahsen Ilyas, H. M., Mohammad Tabish, Jinping Xiong, Muhammad Mubeen, Bharat Prasad Sharma, Muhammad Uzair Malik, Muhammad Usman Ali et al. "α-PbO Recovery from Spent Lead Paste by Coalesced Reduction and Sulfur Fixation." Industrial & Engineering Chemistry Research 63, no. 10 (2024): 4509-4518.

Boakye, Felix Ofori, Marshet Getaye Sendeku, Anuj Kumar, Saira Ajmal, Kwadwo Asare Owusu, Kassa Belay Ibrahim, Mohammad Tabish et al. "Engineering Active Sites on Binary Metal Selenide Heterointerface Catalyst to Boost Urea Electrooxidation." Applied Catalysis B: Environment and Energy (2024): 124013.

Kumar, Jeyaraj Vinoth, Krishnan Venkatesh, M. S. P. Sudhakaran, Periyakaruppan Karuppasamy, Khalid M. Alotaibi, Nattamai Perumal Krishnan, Chelladurai Karuppiah, Chun-Chen Yang, and Sayee Kannan Ramaraj. "Simple construction of gadolinium cobaltite perovskite (GdCoO3): Unveiling the dynamic electrode potential for pseudocapacitors." Journal of the Taiwan Institute of Chemical Engineers 157 (2024): 105411.

Pavitra, Eluri, Lintymol Antony, Kugalur Shanmugam Ranjith, Khalid Alotaibi, Jeong-Hwan Lee, Seung Kyu Hwang, Ganji Seeta Rama Raju, Young-Kyu Han, and Yun Suk Huh. "Near-infrared light driven highly efficient and thermally stable Gd2Ti2O7: Er3+/Yb3+ sub-microspheres for photocatalytic and plant growth LED applications." Journal of Alloys and Compounds 979 (2024): 173574.

Sharmila, K., Latha Srinivasan, K. Vijayalakshmi, Matar Alshalwi, Khalid M. Alotaibi, P. N. Sudha, P. Supriya Prasad, S. Sugashini, G. Lavanya, and M. Deepa. "Evaluation of efficacy of chitosan oligosaccharide-salicylaldehyde Schiff base to extract copper (II) and chromium (VI) from synthetic wastewater." Biomass Conversion and Biorefinery (2024): 1-16.

Singh, Swati, Pradeep Kumar Sharma, Anju Rani, and Khalid M. Alotaibi. "Assessing lab-scale hybrid wetland performance for pollutant and pathogen removal from high organic loading septage." Groundwater for Sustainable Development 25 (2024): 101097.

Raju, Ganji Seeta Rama, Vivek Kumar Gupta, Kugalur Shanmugam Ranjith, Khalid Alotaibi, Jeong-Hwan Lee, Eluri Pavitra, Yun Suk Huh, and Young-Kyu Han. "Green-emitting lanthanum niobate mesoporous nanospheroids for near-infrared light responsive cancer theranostics." Ceramics International (2024).

*Ahmad, Ashfaq, Hassan Mohammed Al-Swaidan, Ahmad Hamed Alghamdi, **Khalid Mohammed Alotaibi**, Mohammad Rafe Hatshan, Sajjad Haider, and Imran Khan. "Facile synthesis of mesoporous active carbon from the valorisation of biomass waste and assessment of sequester efficiency of arsenic (As) from water." Journal of Analytical and Applied Pyrolysis (2023): 106304.*

*Arif, Muhammad, Anuj Kumar, Muhammad Asim Mushtaq, Umair Azhar, Muhammad Sagir, Muhammad Bilal Tahir, Unaiza Talib, Saira Ajmal, **Khalid M. Alotaibi**, and Ghulam Yasin. "Edge-hosted CoFeB active sites with graphene nanosheets for highly selective nitrogen reduction reaction towards ambient ammonia synthesis." Chemical Engineering Journal (2023): 145368.*

*Hermi, Sabrine, Mohamed Habib Mrad, Abdullah A. Alotaibi, Burak Tüzün, Uwe Böhme, **Khalid M. Alotaibi**, Abdelhak Othmani, Hamdy A. Hassan, and Cherif Ben Nasr. "A New 1-D polymeric chains of (C5H6ClN2)[CdCl3H2O]. H2O perovskite: Synthesis, Structure, Physico-Chemical Characteristics, Theoretical calculations, and Biological Effects." Inorganic Chemistry Communications (2023): 111122.*

*Nawar, Ahmed M., Suliman A. Alderhami, I. S. Yahia, Samer H. Zyoud, Laila Almanqur, Yasser T. Alharbi, Rajeh Alotaibi, and **Khalid Alotaibi**. "Single oscillator model assessments and dielectric loss of non-crystalline brilliant green films, and characterization of brilliant green/p-Si photodetectors." Journal of Non-Crystalline Solids 613 (2023): 122376.*

*Hermi, Sabrine, Mohamed Habib Mrad, Abdullah A. Alotaibi, Burak Tüzün, Uwe Böhme**, Khalid M. Alotaibi**, Abdelhak Othmani, Hamdy A. Hassan, and Cherif Ben Nasr. "A New 1-D polymeric chains of (C5H6ClN2)[CdCl3H2O]. H2O perovskite: Synthesis, Structure, Physico-Chemical Characteristics, Theoretical calculations, and Biological Effects." Inorganic Chemistry Communications (2023): 111122.*

***Alotaibi, Khalid M**., Arun K. Shukla, Elham Bajuayfir, Abdullah A. Alotaibi, Mohamed H. Mrad, Fatma A. Gomaa, and Abdullah M. Alswieleh. "Ultrasound-Assisted Synthesis of MSNs/PS Nanocomposite Membranes for Effective Removal of Cd2+ and Pb2+ ions from Aqueous Solutions." Ultrasonics Sonochemistry (2023): 106497.*

*Kim, Eun-Bi, M. Shaheer Akhtar, **Khalid Alotaibi**, Anees A. Ansari, and Sadia Ameen. "Thiadiazole based π-conjugated small molecule as donor material for highly stable and efficient bulk heterojunction organic solar cells." Organic Electronics 120 (2023): 106832.*

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*Kandula, Kumara Raja, Tukaram Shet, Mohan Nuthalapatib, Lokeswara Rao Koneti, Anees A. Ansari, **Khalid M. Alotaibi**, Abdullah A. Alotaibi et al. "Structural Phase Modulation in Lanthanum-and Tin-Cosubstituted Pb (Zr, Ti) O3 Ceramics and its Energy and Pyroenergy Storage Properties." physica status solidi (a) 220, no. 2 (2023): 2200421.*

*Akram, Hafiz Adnan, Muhammad Imran, Shoomaila Latif, Mohammad Rafe Hatshan, Mujeeb Khan, Abubkr Abuhagr, **Khalid Mohammed Alotaibi**, and Syed Farooq Adil. "Bi^{3+}/Ce^{3+} doped ZnO nanoparticles with enhanced photocatalytic and dielectric properties." Journal of Saudi Chemical Society (2022): 101567.*

*Aqel, A.; Ghfar, A. A.; Yusuf, K.; **Alotaibi, K. M.**; Alafra'a, R. M.; Habila, M. A.; Badjah-Hadj-Ahmed, A.-Y.; Alothman, Z. A. Montmorillonite-based polymethacrylate composite monoliths as stationary phase materials for food and pharmaceutical analysis in capillary liquid and gas chromatography. J Chromatogr A **2022**, 463695.*

*Ayari, C.; Alotaibi, A.A.; Baashen, M.A.; Perveen, F.; Almarri, A.H.; **Alotaibi, K.M**.; Abdelbaky, M.S.M.; Garcia-Granda, S.; Othmani, A.; Nasr, C.B.; Mrad, M.H. A New Zn(II) Metal Hybrid Material of 5-Nitrobenzimidazolium Organic Cation (C7H6N3O2)2[ZnCl4]: Elaboration, Structure, Hirshfeld Surface, Spectroscopic, Molecular Docking Analysis, Electric and Dielectric Properties. Materials 2022, 15, 7973. https://doi.org/10.3390/ma15227973*

*Alshahrani, A. A.; Al-Zoubi, H.; Alotaibi, S. E.; Hassan, H. M. A.; Alsohaimi, I. H.; **Alotaibi, K. M**.; Alshammari, M. S.; Nghiem, L.; Panhuis, M. I. H. Assessment of commercialized nylon membranes integrated with thin layer of MWCNTs for potential use in desalination process. Journal of Materials Research and Technology **2022**, 21, 872–883.*

*Beagan, A.; Alshammari, R.; Alotaibi, L.; Albarrak, H.; **Alotaibi, K**.; Alswieleh, A. High-Efficient Anionic Dyes Removal from Water by Cationic Polymer Brush Functionalized Magnetic Mesoporous Silica Nanoparticles. Processes **2022**, 10, 1565. https://doi.org/10.3390/pr10081565*

*Alharthi, F.A., Alanazi, H.S., **Alotaibi, K.M.**, Ahmad, Naushad. Photodegradation of methylene blue and Rose Bengal employing g-C3N4/ZnWO4 nanocatalysts under ultraviolet light irradiation. J Nanopart Res 24, 125 (2022). https://doi.org/10.1007/s11051-022-05510-7*

*Alfawaz, A.; Alzahrani, K.; Niazy, A.; Alghamadi, H.; Lambarte, R.; Beagan, A.; Alfhaid, L.; **Alotaibi, K**.; Alswieleh, A. Smart Nanocarrier Based on Poly(oligo(ethylene glycol) methyl ether acrylate) Terminated pH-Responsive Polymer Brushes Grafted Mesoporous Silica Nanoparticles. Appl. Sci. 2022, 12, 3688. https://doi.org/10.3390/app12073688*

*Almethen, A.A**.; Alotaibi, K.M**.; Alhumud, H.S.; Alswieleh, A.M. Highly Efficient and Rapid Removal of Methylene Blue from Aqueous Solution Using Folic Acid-Conjugated Dendritic Mesoporous Silica Nanoparticles. Processes 2022, 10, 705. https://doi.org/10.3390/pr10040705*

*Ansari AA, **Aldajani KM**, AlHazaa AN, Albrithen HA. Recent progress of fluorescent materials for fingermarks detection in forensic science and anti-counterfeiting. Coordination Chemistry Reviews. 2022 Jul 1;462:214523.*

*Ayari, C.; Alotaibi, A.A.; Baashen, M.A.; **Alotaibi, K.M.**; Alharbi, K.H.; Othmani, A.; Fujita, W.; Nasr, C.B.; Mrad, M.H. Synthesis of New Homopiperazine-1.4-Diium Tetrachloridromercurate (II) Monohydrate $(C_5H_{14}N_2)[HgCl_4]\cdot H_2O$, Crystal Structure, Hirshfeld Surface, Spectroscopy, Thermal Analysis, Antioxidant Activity, Electric and Dielectric Behavior. Crystals 2022, 12, 486. https://doi.org/10.3390/cryst12040486*

*Hermi S, Alotaibi AA, Alswieleh AM, **Alotaibi KM**, Althobaiti MG, Jelsch C, Wenger E, Nasr CB, Mrad MH. The Coordination Behavior of Two New Complexes, $[(C_7H_{10}NO_2)CdCl_3]_n$(I) and $[(C_7H_9NO_2)CuCl_2]$ (II), Based on 2,6-Dimethanolpyridine; Elaboration of the Structure and Hirshfeld Surface, Optical, Spectroscopic and Thermal Analysis. Materials (Basel). 2022 Feb 22;15(5):1624. doi: 10.3390/ma15051624. PMID: 35268855; PMCID: PMC8911489.*

*Ayari, C., Alotaibi, A.A., **Alotaibi, K.M**. et al. A new Hg(II) hybrid compound $(C_6H_9N_2)[Hg_6Cl_{13}]\cdot H_2O$ elaboration, crystal structure, spectroscopic, thermal, and DFT theoretical calculations. Chem. Pap. 76, 2327–2340 (2022). https://doi.org/10.1007/s11696-021-02002-1*

*Bel Haj Salah S, Hermi S, Alotaibi AA, **Alotaibi KM**, Lefebvre F, Kaminsky W, Ben Nasr C, Mrad MH. Stabilization of hexachloride net with mixed Sn (IV) metal complex and 2, 3-dimethylanilinium organic cation: elaboration, optical, spectroscopic, computational studies and thermal analysis. Chemical Papers. 2022 Jan 28:1-3.*

*Althobaiti, M.G.; Hermi, S.; Alotaibi, A.A.; **Alotaibi, K.M**.; Hassan, H.A.; Mi, J.-X.; Nasr, C.B.; Mrad, M.H. A New Cu(II) Metal Complex Template with 4–Tert–Butyl-Pyridinium Organic Cation: Synthesis, Structure, Hirshfeld Surface, Characterizations and Antibacterial Activity. Crystals **2022**, 12, 254. https://doi.org/10.3390/cryst12020254*

*Alotaibi, A. A.; Ayari, C.; Bajuavfir, E.; Ahmad, A.; Al-Nahdi, F.; Alswieleh, A. M.; **Alotaibi, K. M.**; Mi, J.-X.; Nasr, C. B.; Mrad, M. H. Stabilization of Tetrachloride with Mn (II) and Co (II)Complexes and 4-Tert-Butylpyridinium Organic Cation: Elaboration of the Structure and Hirshfeld Surface, Optical, Spectroscopic and Thermal Analyses. Crystals 2022, 12.*

*Beagan, A**.; Alotaibi, K**.; Almakhlafi, M.; Algarabli, W.; Alajmi, N.; Alanazi, M.; Alwaalah, H.; Alharbi, F.; Alshammari, R.; Alswieleh, A. Amine and Sulfonic Acid Functionalized Mesoporous Silica as an Effective Adsorbent for Removal of Methylene Blue from Contaminated Water. Journal of King Saud University - Science **2021**, 101762.*

*Alotaibi, A.A.; Shukla, A.K.; Mrad, M.H.; Alswieleh, A.M.; **Alotaibi, K.M.** Fabrication of Polysulfone-Surface Functionalized Mesoporous Silica Nanocomposite Membranes for Removal of Heavy Metal Ions from Wastewater. Membranes **2021**, 11, 935. https://doi.org/10.3390/membranes11120935*

***Alotaibi, K.M.;** Almethen, A.A.; Beagan, A.M.; Al-Swaidan, H.M.; Ahmad, A.; Bhawani, S.A.; Alswieleh, A.M. Quaternization of Poly (2-Diethyl Aminoethyl Methacrylate) Brush-Grafted Magnetic Mesoporous Nanoparticles Using 2-Iodoethanol for Removing Anionic Dyes. Appl. Sci. **2021**, 11, 10451.*

*Tariq, A., BHAWANI, S. A., Asaruddin, M. R., & **Alotaibi, K. M**. (2021). 2 - Introduction to nanocomposites. In S. A. BHAWANI, Z. Karim, & M. Jawaid (Eds.), Woodhead Publishing Series in Biomaterials (pp. 15–37). Woodhead Publishing.*

*Tariq, A., BHAWANI, S. A., Nisar, M., Asaruddin, M. R., & **Alotaibi, K. M**. (2021). 13 - Starch-based nanocomposites for gene delivery. In S. A. BHAWANI, Z. Karim, & M. Jawaid (Eds.), Woodhead Publishing Series in Biomaterials (pp. 263–277). Woodhead Publishing.*

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*Gomaa, H. E., Alotaibi, A. A., Gomaa, F. A., Bajuayfir, E., Ahmad, A., & **Alotaibi, K. M**. (2021). Integrated Ion Exchange-Based System for Nitrate and Sulfate Removal from Water of Different Matrices: Analysis and Optimization Using Response Surface Methodology and Taguchi Experimental Design Techniques. Process Safety and Environmental Protection, 1–49. http://doi.org/10.1016/j.psep.2021.07.045*

***Alotaibi, K. M.** (2021). Mesoporous silica nanoparticles modified with stimuli-responsive polymer brush as an efficient adsorbent for chlorophenoxy herbicides removal from contaminated water. International Journal of Environmental Analytical Chemistry, 1–14. http://doi.org/10.1080/03067319.2021.1907362.*

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*Ahmad, A., Al-Swaidan, H. M., Alghamdi, A. H., **Alotaibi, K. M**., Alswieleh, A. M., Albalwi, A. N., & Bajuayfir, E. (2021). Efficient sequester of hexavalent chromium by chemically active carbon from waste valorization (Phoenix Dactylifera). Journal of Analytical and Applied Pyrolysis, 105075.*

*Alswieleh, A. M., Albahar, H. Y., Alfawaz, A. M., Alsilme, A. S., Beagan, A. M., Alsalme, A. M., Mohammed S. Almeataq, Ahmed Alshahrani, and **Khalid M. Alotaibi**. (2021). Evaluation of the Adsorption Efficiency of Glycine-, Iminodiacetic Acid -, and Amino Propyl-Functionalized Silica Nanoparticles for the Removal of Potentially Toxic Elements from Contaminated Water Solution. Journal of Nanomaterials, **2021**(1-3), 1–12*

*Bhawani, s. a., Nisar, m., Tariq, a., **Alotaibi, k. m**., & Asaruddin, m. r. **(2021).** Chapter seven - enzyme-responsive polymer composites and their applications. Woodhead publishing series in composites science and engineering (pp. 169–182). woodhead publishing.*

*Tariq, A., Bhawani, S. A., **Alotaibi, K. M**., & Moheman, A. **(2021)**. Chapter Six - Smart biopolymers and their applications. Woodhead Publishing Series in Composites Science and Engineering (pp. 145–167). Woodhead Publishing.*

*Beagan, A.M.; Alghamdi, A.A.; Lahmadi, S.S.; Halwani, M.A.; Almeataq, M.S.; Alhazaa, A.N.; **Alotaibi, K.M.**; Alswieleh, A.M. Folic Acid-Terminated Poly (2-Diethyl Amino Ethyl Methacrylate) Brush-Gated Magnetic Mesoporous Nanoparticles as a Smart Drug Delivery System. Polymers **2021**, 13, 59.*

*Tariq, A., bhawani, S. A., & **Alotaibi, K. M**. (2021). 10 - Xanthan gum-based nanocomposites for tissue engineering. In S. A. BHAWANI, Z. Karim, & M. Jawaid (Eds.), Woodhead Publishing Series in Biomaterials (pp. 191–206). Woodhead Publishing.*

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*Bhawani, s. a., suhaili, n. b., roland, r. m., bakhtiar, s., **alotaibi, k. m**., & mohammad ibrahim, M. N. **(2020).** Template Assisted Synthesis of Molecularly Imprinted Polymer for the Extraction of p-Coumaric Acid. Asian Journal of Chemistry, 32(9), 2342–2346.*

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