1. Name and Academic Rank:

A. S. Mohammad Sayem Mozumder
Assistant Professor- Full time

2. Degrees with fields, institution and date:

Ph.D. Chemical Engineering, University of Western Ontario, London, Ontario, Canada, 2010
M.Sc. Chemical Engineering, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, 2004
B.Sc. Chemical Engineering, Bangladesh University of Engineering & Technology, Dhaka, Bangladesh, 2000

3. Years of Service on UAEU, Chemical & Petroleum Engineering Department.

Years of service at UAEU: 5
Date of Original Appointment: August, 2011

4. Other related experiences-teaching, industrial, etc:

- Guest Researcher, Department of Chemical Engineering, Kagoshima University, Kagoshima, Japan. July 2014 – August 2014(Funded by JPI-JCCP)
- Visiting Researcher, Department of Chemical and Biochemical Engineering, University of Western Ontario (UWO), London, Ontario, Canada. July 2012 – August 2012
- Post-doctoral Research Fellow, Schulich School of Medicine & Dentistry and Chemical & Biochemical Engineering, University of Western Ontario, London, Ontario, Canada. May 2010-August 2011
- Visiting Researcher, National Research Council (NRC), London, Ontario, Canada. February 2006 – February 2010
- Research Assistant, Schulich School of Medicine & Dentistry, University of Western Ontario, London, Ontario, Canada. July 2009 – April 2010
- Research Assistant, Department of Chemical and Biochemical Engineering, University of Western Ontario (UWO), London, Ontario, Canada. September 2005 – April 2010
- Teaching Assistant, Department of Chemical and Biochemical Engineering, University of Western Ontario (UWO), London, Ontario, Canada. September 2005 – April 2010
- Lecturer B, Department of Chemical Engineering, King Fahd University of Petroleum & Minerals, Dhahran 31261, Saudi Arabia. Dec. 2004 – April 2005
- Research & Teaching Assistant, Department of Chemical Engineering, King Fahd University of Petroleum & Minerals, Dhahran 31261, Saudi Arabia. Sept. 2002 – Dec. 2004
- Trainer, PhD, Masters and Summer students, University of Western Ontario (UWO), London, Ontario, Canada. May 2009 – August 2011
- Industrial Collaboration, DENTSPLY Tulsa Dental Specialties, Tulsa, OK 74135, USA. February 2011- August 2011
- Industrial Training, Karnaphuli Fertilizer Company (KAFCO) Ltd., Chittagong, Bangladesh. October 1998

5. Patents and Publications:

Research Grants, Patents and Publications:

Research Grants:

Principal Investigator (2014-2017), "Development of Superhydrophobic Self-Cleaning Powder Coatings for Solar Panels", Award amount**:** AED 442,000 for three years, Award date: January 2014 (Running).

Principal Investigator (2014-2016), "Development and characterization of nanobiocomposites for biomedical applications", Award amount: AED 385,000 for two years, UAEU-NRF grant (externally evaluated), Award date: January 2014 (on extension).

Principal Investigator (2013-2014), "Development and characterization of biocompatible polymeric powder coatings", Award amount: AED 30,000 for one year, Award date: June 2013. (Completed)

Book chapter:

1. Mozumder, M.S., Mourad, A.-H.I., Perinpanayagam, H., Zhu, J. (2014) Nano-TiO_2-enriched biocompatible polymeric powder coatings: Adhesion, thermal and biological characterizations. Trans Tech Publications, Switzerland.

Patents:

[1] Zhu, J, Perinpanayagam, H, **Mozumder, M.S**, Zhang, H, and Shi, W, "Biocompatible Polymer Nanoparticle Coating Composition and Method of Production Thereof", US Patent, 20130059946, March 7, 2013 [Citations: 2]**. (**Link**)**

[2] Zhu, J., **Mozumder, M.S**, Perinpanayagam, H, Shi, W, and Zhang, H, "Biocompatible Polymer Nanoparticle Coating Composition and Applications Thereof", Chinese Patent, 11C10062CN, April 25, 2011.

Articles published in referred journals:

[1] Mourad, A.-H.I., **Mozumder, M.S.***, Mairpady, A., Pervez, H. and Kannuri, U.M. (2017) On the Injection Molding Processing Parameters of HDPE-TiO2 Nanocomposites, *Materials* 10(1): 85 (Published online on 22 January 2017: doi: 10.3390/ma10010085) (**SJR: 0.873, ISI IF: 2.728**, **h-index: 48,** citations: 0). (40% contribution; *Corresponding Author)

[2] Pervez, Hifsa, **Mozumder, M.S*.**, Mourad, A.-H.I. (2016) Optimization of injection molding parameters for HDPE/TiO2 nanocomposites fabrication with multiple performance characteristics using the Taguchi method and Grey relational analysis, *Materials* 9(8): 710 (Published online on 22 August 2016: doi:10.3390/ma9080710) (**SJR: 0.873, ISI IF: 2.728**, **h-index: 48,** citations: 0). (40% contribution; *Corresponding Author)

[3] **Mozumder, M.S.**, Alraeesi, A., and Mourad, A.-H.I. (2016) Awareness of UAE University Chemical Engineering Students on ABET Accreditation criterion/a-k outcomes linked to the course syllabi. *Merit Research Journal of Education and Review* 2016, 4(7): 101-112. (**ISI Impact Factor: 0.264**)

[4] **Mozumder, M.S.**, Mairpady, A., Mourad, A.-H.I. (2016) Polymeric nanobiocomposites for biomedical applications. *Journal of Biomedical Materials Research Part B: Applied Biomaterials*, published online on 23 Feb 2016 (DOI: 10.1002/jbm.b.33633). (**SJR: 0.784, ISI IF: 2.881**, **h-index: 72,** citations: 1).

[5] **Mozumder, M. S.**, Mourad, A.-H.I., Zhang, H., Zhu, J. (2015) Micro-nano structured superhydrophobic polymeric powder coatings. *Nano Studies* 12: 25-32.

[6] Hou, N.Y., Perinpanayagam, H., **Mozumder, M.S.**, Zhu, J. (2015) Novel Development of Biocompatible Coatings for Bone Implants. *Coatings* 5 (4), 737-757. (**SJR:, h-index:,** citations: 1). (30% Contribution.)

[7] **Mozumder, M.S.**, Mourad, A.-H.I., Perinpanayagam, H., Zhu, J. (2014) Nano-TiO_2-enriched biocompatible polymeric powder coatings: Adhesion, thermal and biological characterizations. *Advanced Materials Research. 995: 113-124*. (**SJR: 0.115, ISI IF: 0.23**, **h-index: 22,** citations: 0).

[8] **Mozumder, M.S.**, Mourad, A.-H.I., Perinpanayagam, H., Zhu, J. (2014) Nano-SiO_2 enriched biocompatible powder coatings. *Materials Today Proceedings 2: 147-152*. (**SJR: 0.529, h-index: 2,** citations: 1)

[9] Shi, W., **Mozumder, M.S.**, Zhu, J., and Perinpanayagam, H. (2012) MTA-enriched nanocomposite TiO_2-

polymeric powder coatings support human mesenchymal cell attachment and growth. *Biomedical Materials. 7(5): 055006*. (The article has been highlighted in *Mesenchymal Cell News 4.3*). (**SJR: 0.936, ISI IF: 3.361**, **h-index: 13,** citations: 7). (40% Contribution.)

[10] **Mozumder, M.S.**, Zhu, J., and Perinpanayagam, H. (2012) Titania-polymeric powder coatings with nano-topography support enhanced human mesenchymal cell responses. *Journal of Biomedical Materials Research Part A. 100A: 2695-2709.* (**SJR: 0.979, ISI IF: 3.263**, **h-index: 107,** citations: 16).

[11] **Mozumder, M.S.**, Zhu, J., and Perinpanayagam, H. (2011) TiO_2-Enriched Polymeric Powder Coatings Support Mesenchymal Cell Spreading and Differentiation. *Biomedical Materials. 6 (3):035009.* (The article has been included in *Biomedical Materials* Highlights of 2011 collection among its best 11 articles published in year 2011; also included in the journal's compilation of the best papers published in years 2011 and 2012). (**SJR: 0.936, ISI IF: 3.361**, **h-index: 13,** citations: 18)

[12] **Mozumder, M.S.**, Zhang, H., and Zhu, J. (2011) Mimicking *Lotus Leaf*: Development of Micro-Nanostructured superhydrophobic powder coatings. *Macromolecular Materials & Engineering. 296 (10):929-936.* (**SJR: 0.865, ISI IF: 2.834**, **h-index: 66,** citations: 12).

[13] **Mozumder, M.S.**, Zhu, J., and Perinpanayagam, H. (2011) Nano-TiO_2 enriched Polymeric Powder Coatings Support Human Mesenchymal Cell Attachment and Growth. *Journal of Biomaterials Applications. 26 (2): 173-193.* (**SJR: 0.666, ISI IF: 1.988**, **h-index: 38,** citations: 14).

[14] Hashem, N., **Mozumder, M.S.**, Deller-Quinn, M., and Perinpanayagam, H. (2010) Endodontic MTA materials support human mesenchymal cell attachment and differentiation. *Journal of Canadian Dental Association*. 76: a95. (**SJR: 0.204, ISI IF: 1.320**, **h-index: 42,** citations: 0). (20% Contribution.)

[15] Alnaizy, R.S, **Mozumder, M.S.,** and Abu-Sharkh, B. F. (2008) Effects of hydrophobe contents of amphiphilic polyelectrolytes on flocs size and removal efficiency of NOM from waters. *Journal of Water Supply: Research and Technology. 57(5): 329-336.* (**SJR: 0.399, ISI IF: 0.807**, **h-index: 36,** citations: 0). (50% Contribution.)

[16] **Mozumder, M.S.,** Alnaizy, R.S., Umar, Y., Ali, S.A., and Abu-Sharkh, B.F. (2005) Influence of hydrophobe content and salt concentration on dilute solution behavior of hydrophobically modified ionic polymers from diallylammonium salts/sulfur dioxide cyclocopolymerization: light scattering and fluorescence spectroscopy. *European Polymer Journal. 41: 2224-2231*. (**SJR: 1.052, ISI IF: 3.477**, **h-index: 97,** citations: 7).

[17] Hussein, I.A., **Mozumder, M.S.,** Abu-Sharkh, B.F., Ali, S.A., and Alnaizy, R.S. (2005) Influence of hydrophobe content on the solution rheology of hydrophobically modified terpolymer of SO_2, N,N-diallyl-N-carboethoxymethylammonium chloride. *European Polymer Journal. 41: 2472-2482.* (**SJR: 1.052, ISI IF: 3.477**, **h-index: 97,** citations: 4). (50% Contribution.)

International conference contributions:

1. Pervez, Hifsa, **Mozumder, M. S.**, Mourad, A.-H.I. (2016) Optimization of Injection Molding Process Conditions while manufacturing HDPE/TiO2 Nano-Composites, AES-ATEMA 29th Int. Conference, pp. 133 – 139.
2. **Mozumder, M.S.**, Alraeesi, A., and Mourad, A.-H.I. (2016) Awareness of UAE University Chemical Engineering Students on ABET Accreditation. *EduTeach 2016-Canadian International Conference on Advances in Education, Teaching &Technology "Challenges & Issues in Technological transformation"* 16-17 July, 2016 , Toronto, Canada.
3. **Mozumder, M.S.**, Mourad, A-H.I, Pervez, H, Mairpady, A. (2016) Manufacturing and performance assessment of injection molded HDPE-TiO2 nanocomposites for biomedical applications: Effects of barrel temperature and residence time. 6th Global Experts Meeting on Nanomaterials and Nanotechnology, Dubai, UAE 21-23 April 2016.
4. **Mozumder, M.S.**, Mourad, A.-H.I., Mairpady, A., Pervez, H. (2015) Mechanical and thermal properties of HDPE/TiO2 nanocomposites. 6th International Chemical and Environmental Engineering Conference (ICEEC 2015), Kuala Lumpur, Malaysia 27-29 December 2015.
5. **Mozumder, M.S.**, Mourad, A.-H.I., Zhang, H., Zhu, J. (2015) Micro-Nano Structured Superhydrophobic Polymeric Powder Coatings. International Conference & Exhibition on Advanced & Nano Materials (ICANM 2015), Ottawa Canada 10-12 August 2015.
6. **Mozumder, M.S.**, Mourad, A.-H.I., Perinpanayagam, H., Zhu, J. (2015) MTA-Enriched Polymer-Titania Biocompatible Powder Coatings. 2nd ISBPPB International Conference and Exposition, Orlando, FL, USA 8-10 July 2015.
7. **Mozumder, M.S.**, Mourad, A.-H.I., Perinpanayagam, H., Zhu, J. (2014) Nano-SiO_2 enriched biocompatible

powder coatings. 5th International Conference on Advanced Nanomaterials, Aveiro, Portugal 2-4 July 2014.

8. **Mozumder, M.S.**, Mourad, A.-H.I., Perinpanayagam, H., Zhu, J. (2014) Ultrafine polymeric powder coating technique to fabricate micro/nano-scale topographic coatings for implants. Scandinavian Society for Biomaterials – 7th annual meeting iNANO, Aarhus University, Aarhus, Denmark 26 – 28 March 2014.
9. Hashem, N., **Mozumder, M.S.**, Deller-Quinn, M., and Perinpanayagam, H. (2010) Endodontic MTA materials support human mesenchymal cell attachment and differentiation. Journal of Canadian Dental Association. 76: a95.
10. Shugg, J., Seyedmehdi, S.A., **Mozumder, M.S.,** Zhang, H., and Zhu, J. (2009) Development of functional coatings including superhydrophobic and antimicrobial surfaces. Particle Technology Research Conference, 9-10 July 2009, London, ON, Canada.
11. Alnaizy, R.S., **Mozumder**, **M.S.** and Abu-Sharkh, B.F. (2005) Optimal application of amphiphilic polyelectrolytes as primary flocculants in NOM-contaminated water. **7th World Congress of Chemical Engineer (WCCE)**, 10 – 14 July 2005, Scotland.
12. Alnaizy, R.S., **Mozumder**, **M.S.** and Abu-Sharkh, B.F. (2005) Amphiphilic Polyelectrolytes as Primary Flocculants/Coagulants in Water Treatment: Dynamic Light Scattering Study. **World Water and Environmental Resources Congress**, Salt Lake City, Utah, June 27- July 1, 2004.

6. Scientific and professional societies:

Member, American Institute of Chemical Engineers, Saudi Arabian Session (SAS-AIChE)

7. Honors and awards:

- One of my publications is highlighted in *Mesenchyman Cell News 4.3*.
- One of my published articles has been included in *Biomedical Materials* Highlights of 2011 collection among its best 11 articles published in year 2011.
- ***NSERC Visiting Fellowship (VF)***, 2011.
- ***NSERC Industrial R&D Fellowship (IRDF)***, 2011.
- ***Ontario Graduate Scholarship (OGS)***, 2008-2009.
- ***Graduate Student Teaching Award*** *2009, University of Western Ontario, Canada.*
- ***1st Prize, '****Student Video Competition', PTRC Conference 2009, London, ON, Canada*
- ***Western Engineering Scholarship (WES)***, The University of Western Ontario, 2005-2010
- ***Graduate Student Scholarship***, King Fahd University of Petroleum & Minerals, 2002 –2004
- ***Technical Scholarship***, Bangladesh University of Engineering &Technology, (1995-2000)
- ***Merit Scholarship***, Bangladesh University of Engineering &Technology (1999-2000)
- *National Award (**Gold medal**) in 'Instant Essay Writing', Dhaka, Bangladesh, 1990.*

8. Institutional and professional services in the last five years:

- Supervisor, Graduation Project I, February 2013 to till date
- Supervisor, Graduation Project I & II, February 2012 to January 2013
- Examiner, M.Sc. Thesis Defense (Ms. Bushra), June 2012
- Examiner, M.Sc. Thesis Defense (Ms. Shereen), June 2014
- Examiner, Industrial Training, 2011-2014
- Examiner, Graduation Projects, 2011-2014
- Reviewer, Particulogy, Since 2010
- Developer, Several undergraduate courses including Mass Transfer and Fluid Mechanics, 2011-2012
- Member, Several committees at the Department and College levels, 2011-2012
- *Vice-President, Titumir Hall (a student dorm), Bangladesh University of Engineering & Technology, Dhaka, Bangladesh (1999-2000).*
- *Member, EUCSU (Engineering University's Central Student Union), BUET, Dhaka, Bangladesh (1999-2000).*
- *General Secretary, Chemical Engineering Association, BUET, Dhaka, Bangladesh (1998-2000)*