

ASIFUL HOSSAIN SEIKH

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PERSONAL PROFILE

- An experienced result oriented Research Professor with a professional background comprising 12 years of research, teaching and supervisory experience in materials, corrosion, mechanical and metallurgy engineering.
- Expert in design and implementation of materials & metallurgical engineering courses, research projects, technical presentations, materials quality control/quality assurance programs and materials compliance with international codes and standards.
- Areas of technical experience include materials/polymer research and testing, nanomaterials, failure analysis, materials specification and selection, corrosion control and monitoring, paints and coating evaluation, inhibitor evaluation and chemical treatment, waste water treatment and water analysis.
- Experienced in optical microscopy, metallography, image analysis, Scanning Electron Microscopy with EDX, X-ray diffraction, Thermo Gravimetric Analysis, Differential Scanning Calorimetry , MTS Instrument and Nano Indenter for structures and properties of materials.

EDUCATIONAL QUALIFICATIONS

- **Ph.D. in Materials and Metallurgical Engineering (2005)** – Jadavpur University, Kolkata, India.
Thesis Title: Corrosion and Inhibitive protection studies of a few Microalloyed Steel.
- **M. S. in Materials and Metallurgical Engineering (1997)** – Jadavpur University, Kolkata, India.
Thesis Title: Effect of heat treatment and prior fatigue deformation on corrosion properties of 4340 steel in saline water.
- **B. S. in Materials and Metallurgical Engineering (1994)** – National Institute of Technology, Durgapur, India.

WORK EXPERIENCE

- Assistant Professor at Advance Manufacturing Institute-Center of Excellence for Research in Engineering Materials, King Saud University, Riyadh, KSA **(2011-Present)**.
- Researcher (Lab & Teaching) at UAE University, Al Ain, UAE **(2005-2010)**.
- Research Assistant at King Abdulaziz City for Science and Technology, Riyadh, KSA **(2003-2005)**.

TEACHING

- **Teaching in Mechanical Engineering Department at UAE University:**

CHEM620: Corrosion and Wear of Materials (Graduate Level)

MTSE 601 and 611: Theory of Materials and Characterization (Graduate Level)

- **Laboratory Teaching Assistant @ Dept of Mechanical Engineering**

- (1) Supervision of Students (Under Graduate and Post Graduate) projects and laboratory works on materials and metallurgy.
- (2) Lead teaching assistant for metallurgy and corrosion laboratory course. Performed one set of experiment during each lab to demonstrate the particular laboratory equipment.

RESEARCH

- **Research Projects Undertaken at King Saud University:**

1. Project Title: Production of High Strength Al alloys with enhanced Electrical Conductivity for Power Transmission Line (Cable) Applications (Project Dates: January 2015 – December- 2015).

Funding: Center for Excellence for Research in Engineering Materials (20,000 SAR).

2. Project Title: Production of superior strength Aluminum Alloys for High-Temperature Applications using Mechanical Alloying. (Project Dates: January 2014 – January 2016).

Funding: The National Plan for Science, Technology and Innovation, King Abdulaziz City for Science and Technology (1.75 Million SAR).

3. Project Title: Developing Corrosion Resistant Nano-coatings filled with conductive polymers for Petroleum Industries Applications (Project Dates: January 2012 - June 2014).

Funding: Center for Excellence for Research in Engineering Materials (250,000 SAR).

4. Project Title: Development of electroless Ni-P and Ni-P-X (where X=CNT, SiC, PTFE) composite coatings with enhanced wear and corrosion resistance for petrochemical industry, (Project Dates: February 2013 - January 2015).

Funding: Center for Excellence for Research in Engineering Materials (150,000 SAR).

5. Project Title: Influence of Processing Parameters on the Kinetics of Austenite Grain Growth in X65 and X70 API Steels (Project Dates: May 2010 - January 2012).

Funding: Center for Excellence for Research in Engineering Materials (500,000 SAR).

- **Approved Project**

1. Project Title: A study of the mechanical properties of newly developed cobalt-free, low-nickel maraging steel at high temperatures (Project Dates: March 2015 – March 2017).

Funding The National Plan for Science, Technology and Innovation, King Abdulaziz City for Science and Technology (1.78 Million SAR).

- **Other Research Projects:**

1. Project Title: Evaluating the Corrosion Resistance of Non Conductive Coatings Using Electrochemical Impedance Spectroscopy (ADCO, UAE).

3. Project Title: Evaluation of Concrete Corrosion Inhibiting Admixture (Gulf Sail Engineering, Abudhabi, UAE).

4. Project Title: Atmospheric Corrosion of Materials and Corrosion of Poles in distribution overhead network in Saudi Arabia (KACST, KSA).

PUBLICATIONS (Intl. Journals and Conference Proceedings)

- M. Baig, H. R. Ammar and **Asiful H. Seikh**, “Thermomechanical responses of nanocrystalline Al-Fe alloy processed using mechanical alloying and high frequency heat induction sintering”, *Materials Science and Engineering: A*, 65(2), 132-141, 2016.
- **Asiful H. Seikh**, Ashfaq Md. , E.M. Sherif, A. Al-Ahmari, “Corrosion behavior in 3.5% NaCl solutions of γ -TiAl processed by electron beam melting process”, *Metals* 2015, 5, 2289-2302.
- M. Baig, H. R. Ammar, **Asiful H. Seikh**, Md. Asif Alam, Jabair Ali Md. “Effect Of Consolidation And Sintering Parameters On The Mechanical Responses Of Nanocrystalline Al-Fe Alloy Processed By Mechanical Alloying”, *Applied Mechanics and Materials*, 87(2015) 719-720.
- Sohail M. Khan, **Asiful H. Seikh**, Muneer Baig, Magdy M. El Rayes: “Electrochemical Corrosion Behavior of Spirally-Welded API Line-pipe Steel in Acidic and Salt Media”, *Manufacturing Science and Technology (MST)*, Vol. 3(5), pp. 286 – 293, 2015.
- M.R. Karim, M.T.I. Bhuiyan, M. A. Dar, **Asiful H Seikh**, M. A. Shar, M. B. Zaman, C. J. Lee, H. J. Kim and M. S. Lee, “Synthesis and characterization of highly organized crystalline rutile nanoparticles by low-temperature dissolution-precipitation process”, *Journal of Materials Research*, Vol.30, Issue 12, 2015, pp 1887-1893.
- Ubair A. Samad, Md. Asif Alam, E. M. Sherif, O. Alothman, **Asiful H. Seikh** and S. Al-Zahrani, “Manufacturing and characterization of corrosion resistant epoxy/2pack coatings incorporated with polyaniline conductive polymer”, *Int. J. Electrochem. Sci.*, 10 (2015) 5599 - 5613.
- **Asiful H Seikh**, M R Karim, “Corrosion inhibitory effect of thiourea on recrystallized E-34 microalloyed steels in acidic media”, *Anti-Corrosion Methods and Materials*, vol.62, issue4, 2015.
- **Asiful H Seikh**, Muneer Baig, H. R. Ammar, “Corrosion Behavior of Nanostructure Al-Fe Alloy Processed by Mechanical Alloying and High Frequency Induction Heat Sintering”, *Int. J. Electrochem. Sci.*, 10 (2015), 3054-3064.
- **Asiful H. Seikh**, Ee. M. Sherif, “Effect of Exposure Period and Temperature on the Corrosion of Incoloy Alloy in HCl Pickling Solutions”, *Int. J. Electrochem. Sci.*, 10 (2015) 1843-1954.
- **Asiful H. Seikh**, E. M. Sherif, “Effects of immersion time and temperature on the corrosion of API Grade X-65 Steel in 1 M H₂SO₄ pickling solution”, *Int. J. Electrochem. Sci.*, 10 (2015) 895-908.
- **Asiful H. Seikh**, E. M. Sherif, Hossam Halfa, “Electrochemical Corrosion Behavior of C-250 Maraging Steel Grade in Sulfuric Acid Pickling Solution”, *Int. J. Electro. Sci.*, 10(2015) 883-894.
- **Asiful H. Seikh**, El-Sayed M. Sherif , “Anodic Dissolution in Sulfuric Acid Pickling Solutions of the API Pipeline X70 Grade Steel”, *Int. J. Electrochem. Sci.*, 10 (2015) 209-222.
- **Asiful H. Seikh**, Mahmoud S. Soliman, Abdulhakim Almajid, Khaled Alhajeri, Waleed Alshalfan, “Grain Growth Kinetics in API X65 and X70 Line-Pipe Steels during Static Heating”, *Advances in Materials Science and Engineering*, Volume 2014, Article ID 246143.
- E. M. Sherif, **Sk. A. Hossain**, “Effects of Immersion Time and 5-Phenyl-1H-tetrazole on the Corrosion and Corrosion Mitigation of Cobalt Free Maraging Steel in 0.5 M Sulfuric Acid Pickling Solutions”, *Journal of Chemistry*, Volume 2013, Article ID 497823.

- **SK.A.Hossain** “Influence of Heat treatment on the Corrosion rate of Microalloyed Steel in Sodium Chloride Solution”, *Journal of Chemistry*, Volume 2013, Article ID 587514.
- **Asiful H. Seikh**, E. M. Sherif, “Effects of Grain Refinement on the Corrosion Behaviour of Microalloyed Steel in Sulphuric Acid Solutions”, *Int. J. Electrochem. Sci.*, 7, 7567-7578, 2012.
- P. K. Mitra, M G. Chaudhuri, S Paul, **Sk A Hossain** & B Duari, “Kinetic studies of localized corrosion of 304 steel in chloride solution”, May/June 2012, No.107, issue of *Corrosion Management a journal of Institute of Corrosion*, 11-13.
- **Asiful Hossain**, Mahmood Mohsin, Yousef Haik, "Thermal and mechanical properties of poly(vinyl alcohol) plasticized with Glycerol" *J. Appl. Polym. Sci.*, Vol. 122-5, 3102-3109, 2011.
- **Sk. A. Hossain**, M.A. Mahasin, Y.Haik: Thermomechanical properties of poly(vinyl alcohol) plasticized with varying ratios of sorbitol, *Mater. Sci. and Engineering: A*, 528 (3), 925-930, 2010.
- **SK.A.Hossain**, A I Almarshad, “Inhibiting Effect of Thiosemicarbazide on Cold Rolled Carbon Steel”, *Corrosion Engineering, Science and Technology*, vol 41, no 1, pp. 77-81(5), 2006.
- **Sk.A.Hossain**, P.K.Mitra, S. Paul, P.Chakroborty and M.K.Mitra, “Effect of heat treatment and prior fatigue deformation on corrosion properties of 4340 steel in saline water”, *Bulletin of Electrochemistry*, 20 (1) January 2004, pp 35-38

Book Chapter:

- **Sk. Asiful Hossain**, P. K Mitra, and S Paul, “Inhibitor treatment of microalloyed steel and its effects in still acid and flowing acid solutions”, *Microalloyed steels –emerging technologies and applications*, Vitasta, 2007, Edited by D Bhattacharjee, U K Chatterjee, S Chatterjee, M Dutta and K K Ray, p421.

Conference Presentations

- Muneer Baig, **Asiful Hossain Seikh**, Hany Rizk Ammar, Mohammad Asif Alam, Jabair Ali Mohammed: “Effect of different compaction and sintering conditions on the thermo-mechanical properties of bulk aluminum produced using mechanical alloying”, AMPT2014, Nov 16-20, 2014, Dubai, UAE [accepted for publication in the *Journal of AMPT*].
- **Asiful H. Seikh**, E. M. Sherif, H. Halfa, “Corrosion resistance performance of newly developed cobalt-free maraging steel over conventional maraging steel in acidic media”, AMPT2014, Nov 16-20, 2014, Dubai, UAE [accepted for publication in the *Journal of AMPT*].
- O.A.Abuzeid, **Asiful Hossain**, and S.M.Zakout: “On the evaluation of steel reinforced concrete inhibitors used in UAE marine structures”, Paper presented in Corrosion Management and Fitness for Service for Oil and Gas Conference, 3-6 December, 2007, Abu Dhabi National Exhibition Company (ADNEC), Abu Dhabi, UAE.
- **SK.A.Hossain**, S.paul and P.K.Mitra, “Inhibitive effect of Thiourea on E-34 microalloyed steels in 1(N) H₂SO₄” Published in NACE International Conference, Goa, 2002.
- **SK.A.Hossain**, M.Choudhury, S.paul and P.K.Mitra, “Kinetic Studies of Localized Corrosion of 304 Steels in chloride solution” Published in NACE International Conference, Mumbai 2000.