

McMaster Steel Research Centre Post-Doctoral Fellow Profile

Name:	Faysal Fayez Eliyan
Department:	Materials Science and Engineering
Supervisor:	Joey Kish
Research Topic:	Oil pipelines corrosion of the steel intermetallic inclusions
Year Started:	2014
Expected Completion:	2016
Degrees Completed:	PhD Materials Engineering, The University of British Columbia, Vancouver, 2014 MASc Materials Engineering, The University of British Columbia, Vancouver, 2011 B.Sc. Hons. (Mechanical Engineering, Qatar University, 2009)

Research Interests:

My expertise covers the materials and mechanical engineering of oil pipelines corrosion and design. I assess the corrosion vulnerability of a pipeline steel that could accidentally be exposed to a hydrated soil, causing external corrosion, or exposed to a multiphase flow, causing internal corrosion. I model the corrosion reactions according to the life expectancy of an oil pipeline, and to how much it will cost to construct and operate.

Career Objectives:

I am looking for a role in a research and development program that guides the functionality of the field or provides consultancy to a multidisciplinary project. I am simultaneously willing to work in the field or get involved in the construction planning or the cost assessment.

Professional Memberships:

MetSoc
NACE

Publications:

1. **Eliyan F.**, Alfantazi A., 2014, "[Mechanisms of Corrosion and Electrochemical Significance of Metallurgy and Environment with Corrosion of Iron and Steel in Bicarbonate and Carbonate Solutions – A Review](#)", *Corrosion*, Vol. 70, pp. 880-898.
2. **Eliyan F.**, Alfantazi A., 2014, "[On the Theory of CO₂ Corrosion Reactions – Investigating Their Interrelation with the Corrosion Products and API-X100 Steel Microstructure](#)", *Corrosion Science*, Vol. 85, pp. 380-393.
3. **Eliyan F.**, Alfantazi A., 2013, "[Adsorption of Oil onto API-X100 Pipeline Steel in CO₂-Saturated Solutions](#)", *Metallurgical and Materials Transactions B*, Vol. 44, pp. 1598-1604.
4. **Eliyan F.**, Alfantazi A., 2013, "[Influence of temperature on the corrosion behavior of API-X100 pipeline steel in 1-bar CO₂-bicarbonate solutions: An electrochemical study](#)", *Materials Chemistry and Physics*, Vol. 140, pp. 508-515.