



ZALILAH SHARER (SAHIR)

DPhil (Materials.) (Oxford), MSc (Gas Eng)(Salford), B.Chem.Eng. (Hons.)(Leeds)

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PROFILE

Zailah Sharer is a lecturer of Gas Engineering and a researcher at Gas Technology Centre (GASTEG). She received a BEng in Chemical Engineering from University of Leeds, MSc Gas Engineering and Management from University of Salford and PhD in Materials from University of Oxford.

Zailah started off her career in 1998 in one of the top household product manufacturing company as a Production Chemist. She was stationed in a Research and Development Department where she developed her skills in research, management, coordinating and ISO quality documentation. She was responsible for new product launching in terms of product formulation and packaging quality. She was also involved in securing accreditation for ISO 9001 for the company which she was responsible for quality assurance for laboratory practice, product formulation and packaging specification. In year 2000, the company built a new Gas Sulphonation Plant in which she was involved in plant design and assuring quality of the end product. After three years working in the industry she changed her working environment by applying for a post in a higher education institute.

She was accepted as a Tutor in Gas Engineering Department, Faculty of Chemical and Natural Resources Engineering, UTM Skudai, Johor in year 2001 before went to the UK to further her Master degree in Gas Engineering and Management. She choose to do a research in Pipeline Failure as her Master dissertation and passed successfully before resumed her tenure as a lecture in Gas Engineering Department, FKKKSA in 2003. She is attached as a staff and researcher at Gas Technology Centre (GASTEG) which specializes to provide training, accredited courses, seminar and education to related gas industry personnel. She was involved in two projects initiated by Gas Malaysia Berhad regarding on Pipeline Failure Project. These projects had triggered her interest to do a PhD study in the area of pipeline failure research.

In 2007, she was accepted at the University of Oxford under Professor John Sykes supervision who is an expert in corrosion and chemical metallurgy. Her work involved in testing pipeline and tank external coating systems using electrochemical techniques such as electrochemical impedance spectroscopy (EIS) and scanning Kelvin probe (SKP). Her work is able to identify whether paint resistance controls corrosion, or not. She obtained her PhD in 2011 with specialization in coating and corrosion.

ACADEMIC QUALIFICATIONS

1. 2011 : **D.Phil. (Materials)**
Department of Materials, University of Oxford United Kingdom
Ph.D Thesis: Investigation of Protective Mechanisms of Organic Coatings by Thermal Testing and Electrochemical Techniques
2. 2002 : **M. Sc. (Gas Engineering and Management)(Coursework)**
University of Salford, United Kingdom.
M.Sc Thesis: Fracture Behaviour of Polyethylene Pipeline
3. 1998 : **Bachelor of Engineering (Chemical) (Hons 2ndClass Upper Division)** University of Leeds, United Kingdom

AREAS OF EXPERTISE

- Electrochemical Techniques (Scanning Kelvin Probe and Electrochemical Impedance)
- Organic Coating Degradation
- Corrosion Protection Mechanism
- High Temperature Effect on Coated Metal

PROFESSIONAL AFFLIATION

1. Graduate Member of Board of Engineers Malaysia (BEM). Membership Number: 76142A
2. Member of Institute of Materials Malaysia (IMM). Membership Number: 4514
3. Member of National Association of Corrosion Engineer. Membership Number: 582166
4. Associate Member of IChemE. Membership Number:99954908

TEACHING

Undergraduate

1. Instrumentation Process
2. Engineering Economy and Project Management
3. Combustion Engineering & Gas Utilization
4. Thermodynamic
5. Principle of Chemical Process 2
6. Numerical Methods
7. Separation 2

Postgraduate

1. Gas Transportation and Storage

Certificate Professional Course

1. Basic Combustion
2. Corrosion and Corrosion Protection

RESEARCH INVOLVEMENT

1. **Title:** Cathodic Disbonding of Painted Mild Steel
Sponsor: UTM Research University Grant RUG (RM20, 000)
Period: 1 April 20123 – 31 March 2013.

2. **Title:** Characterization of Barrier Properties of Organic Paints: The Nanozinc Dust Effectiveness
Sponsor: UTM Research University Grant RUG Tier 1, (RM155, 00)
Period: 1 December 2012 – 31 December 2014
3. **Title:** Sustainable Low Carbon Emission Compressed Natural Gas-Biodiesel Diesel Fuel System Transportation in Malaysia
Sponsor: UTM Research University Grant RUG Tier 1, (RM155, 00)
Period: 1 December 2012 – 31 December 2014
4. **Title:** Effect of NO_x and Carbon Residue Emission Towards Global Warming via (CNG-DDF) Green Sustainable Engine
Sponsor: UTM Research University Grant RUG Tier 1, (RM155, 00)
Period: 1 December 2012 – 31 December 2014

CONSULTATIONS

1. Study of Effectiveness of Commercial and Residential Natural Gas Odourization System in Peninsular Malaysia
Sponsor: Energy Commission
Period: 23 January 2012 – 31st December 2012
2. Engineering Audit on Sabah Energy Corporation Sdn Bhd
Sponsor: Sabah Energy Corporation Berhad
Period: 17 September – 21 September 2012
3. Study on the Natural Gas Pipeline Safe Distances
Sponsor: Gas Malaysia Sdn Bhd
Duration: 1 June 2006 – 30 June 2007
4. Pipeline Failure Investigation: Perai Industrial Estate
Sponsor: Gas Malaysia Sdn Bhd
Duration: 21 February 2005 – August 2005

PUBLICATIONS

1. Z. Sharer Sahir, J.M. Sykes, Effect of Temperature on the Impedance Response of Coated Metals, *AETOC 2013*, Geneva, Switzerland, April 2013
2. Z. Sharer Sahir, J.M.Sykes, Insight into Protection Mechanisms of Organic Coatings from Thermal Testing with EIS, *Progress of Organic Coatings*, 74, 405-409, 2012
3. Zalilah Sharer, John Sykes, Investigation of Blister Formed on Coated Mild Steel using Scanning Kelvin Probe, *Jurnal Teknologi* 56 (Sains & Kej.) Keluaran Khas (1), Dis. 2011: 139–154
4. Z. Sharer Sahir, J.M.Sykes, Insight into Protection Mechanisms of Organic Coatings on Mild Steel, *AETOC 2011*, Mons, Belgium, April 2011

5. Z. Sharer Sahir, J.M.Sykes, Investigation of Protective Mechanisms of Organic Coating using Electrochemical Techniques, *50th Corrosion Symposium Science*, Southampton, UK, September 2010
6. Z. Sharer Sahir, J.M.Sykes, Effect of Temperature on the Impedance Behaviour of Coated Metals in 3% Sodium Chloride Solution, *EUROCORR 2010*, Moscow Russia, September 2010
7. Z. Sharer Sahir, J.M.Sykes, Exposure Tests on Marine Coating at Elevated Temperature, *NACE Corrosion 2010*, San Antonio Texas, USA, March 2010

REFEREES

Associate Professor Dr Rahmat bin Mohsin

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