

Dr. Mohd Nor Azmi bin Alias



“Lifelong learning, coaching and nurturing talent in a customer-driven product innovation organization, through knowledge and experience in cross disciplines, multiple culture and diverse market”

<http://my.linkedin.com/in/norazmialias>

norazmialias@gmail.com

norazmialias@crest.my

+60-12-3085891

EDUCATION

- 1980-1984** **Maktab Rendah Sains MARA, Kulim, Kedah**
- Sijil Rendah Relajaran, Sijil Pelajaran Malaysia
 - Student leader in Badan Perwakilan Pelajar and Lembaga Disiplin Pelajar
- 1985-1987** **MARA Community College, Kuantan, Pahang**
- American Associate Degree in Engineering (Chemical Engineering)
- 1987-1994** **University of Rhode Island, Kingston, R.I., USA**
- **B.Sc. in Chemical Engineering (May 1990)**
 - Awarded American Institute of Chemist award for Outstanding Senior in Chemical Engineering
 - MARA Loan converted to 100% Scholarship
 - **M.Sc. in Chemical Engineering (May 1992)**
 - * Funds for project and MSc degree were provided by Center for Thin Film and Interfacial Research, Brown University and MARA Scholarship.
 - * M.Sc. thesis on “Some Applications of Electrochemical Impedance Spectroscopy”
 - * Utilization of a.c. impedance spectroscopy method to predict (1) the damage on polymer matrix carbon fiber composite under galvanic coupling to metals in seawater, and (2) pitting corrosion on stainless steels.
 - * Investigated corrosion protection properties of titanium nitride (TiN) and zirconium nitride (ZrN) on stainless steel deposited via CAPD technique.
 - * Graduate courses: Engineering Metallurgy, Corrosion & Corrosion Control, Advanced Aqueous Corrosion, Polymer Chemistry, Transport Phenomena, Advanced Chemical Thermodynamics (review paper Hetero vs. Homo-crystallization), Mass Transfer, Advanced Interfacial Phenomena, Finite Element Method
 - * **Ph.D. in Chemical Engineering (December 1994)**
 - * Fully funded through US Office of Naval Research grant on degradation mechanism and performance improvement of carbon fiber composite in marine environment
 - * Ph.D. dissertation in developing of localized electrochemical impedance spectroscopy method for monitoring of pitting corrosion

on steels and aluminum, and localized damage of polymer matrix carbon fiber composite galvanically coupled to metals. Thermodynamic pH-potential diagram was calculated for ZrN, CrN, and HfN to predict the corrosion protection in salt environment. X-ray photoelectron spectroscopy (XPS) technique was utilized to verify the thermodynamic and kinetic models for corrosion protection of nitride coatings.

- * Projects were funded through grants from US Office of Naval Research, Aluminum Company of America, and Multi Arc Scientific Coatings. Findings on the corrosion protection of ZrN were commercialized by Multi Arc Coatings for coatings on steel structures used for oil drilling on ocean bed.
- * Graduate courses: Dynamic Chemical Engineering Application (review paper on Scanning Electrochemical Microscopy), Mechanical Metallurgy, Phase Equilibria, Condensed Matter Physics, Molecular Aspects of Materials Science
- * 16 publications in international technical journal and conference proceedings on corrosion, and materials degradation.

INDUSTRIAL R&D EXPERIENCE

Sep'12 – Present

Collaborative Research in Engineering, Science and Technology (CREST) Center

Senior Vice President, Research Management, Talent Development and Johor Initiatives

- Managing end-to-end R&D grant process, aligning to key clusters and domain areas as defined by stakeholders and facilitate path to commercialization. More than 160 projects awarded with total value more than RM200 million with 64% contribution from industry. Converted every 1 MYR grant into 10-11X multiplier by industry co-funding, revenue from new products and services, salary of industry MSc and PhD and savings from productivity improvement. 25-30% conversion rate of completed projects into commercial products, services or ventures.
- Developing immediate and long term solutions to ensure sustainable talent pipeline for the electrical and electronic sector in Malaysia, through career awareness, up-skilling, targeted internships programs. Collaborating with industry partners – multinational companies and SMEs – universities and public agencies in identifying immediate and future talent needs for growing the E&E sector through collaboration in research, development and product innovation. Partnering TalentCorp, MoE-iCoE, NCIA, MIDA, ILMIA and MIMOS, among other agencies and universities in delivering the sustainable solutions. More than 8000 industry relevant talents trained since 2014 with more than 80% are placed in high value added jobs in the E&E and relevant sectors.
- Initiated Open Innovation Platform, www.crest.my/thegreatlab for interested students and professional to submit their innovative ideas to solve problems

from industry, community and organizations. Nurtured 5 new start-ups and 3 postgraduate research projects from The Great Lab Challenge.

- Initiated urban community farming program at Medini Iskandar Malaysia and JB City Centre area in late 2020.
- Adjunct Lecturer and Advisory Panel at UKM Center for Industry 4.0 for 2021-2023
- Visiting lecturer at USM School of Chemical Engineering 2014-2015
- Adjunct Professor at UM Dept of Materials Engineering 2014-2015.
- Industrial Advisory Panel members at USIM School of Physics, UMP Mechatronics Engineering and Manufacturing, UNIMAP School of Materials Engineering, UM Dept of Materials Engineering, INTI College Penang Dept of Electrical Engineering, UiTM Shah Alam Faculty of Electrical Engineering.

July'06 –Aug'12 **Motorola Technology Sdn Bhd, Bayan Lepas, Penang**
Chief of Staff, Penang Design Center, Motorola Solutions

- **Nov'10-Aug'12:** Assumed **Chief of Staff** role for Penang Design Center. Identify, initiate and drive strategic initiatives through senior leadership team and next generation management and technology leaders. Drives initiatives through scorecards and KPIs. Ensures impactful and effective internal and external communication. Interfaces to government and local agencies, actively participate and to certain extend influences and drives on specific initiatives align to organizational strategy. Takes personal initiative driving talent development programs (GTP/FasTrack, Industrial MSc/PhD, and Internships) to ensure sustainable talent pipeline and growth of core talents. Champions University Relations, Technology Roadmap, and communications for R&D.
- **Jan'08-Nov'10:** Promoted as **Head of Physical Design** in Jan 2008 to lead various product development teams (150+ staffs) responsible for businesses of professional and commercial radios (PCR), Northern American public safety (APCO), European trunking system (TETRA), ruggedized laptop (Data products), audio accessories and shared engineering teams - Design Integration, PCB engineering, Applied Technology. Established **Mechanical Architecture** team leading in concept development of next generation mobile and portable radios. Active participation in developing strategy to drive towards becoming Premier Design Center within G&PS business in 2010 - drive for productivity in meeting business commitments in delivering product on time and of highest quality, developing next generation leaders and advising in establishing technology and architecture team driving the technology development for next generation platforms.
- **July'06-Dec'07:** Hired as **Senior Engineering Manager, Advanced Mechanical Technology** in leading a team of 14 technical staffs in rapid prototyping of new concepts and designs, FEA simulation, new materials characterization and failure analysis, acoustic and audio engineering, and display technology application critical the development of portable and mobile 2-way radio and trunking communication products. Aligned technology development roadmap to support current new product development and future platform development. Performed gap analysis on

effectiveness of Physical Design R&D team to best support Six Sigma Product Development programs, and proposed organization re-structure in order to optimize resources utilization during product development cycle.

- Industry Advisory Panel member for Mechanical Engineering at Universiti Sains Malaysia, Materials Engineering at Universiti Malaya, and Mechatronics Engineering at Universiti Malaysia Perlis.

2004-June 2006 **InventQjaya Sdn Bhd**, Cyberjaya, Selangor Darul Ehsan
Director, Advance Electrochemistry Laboratory

- Hired as **R&D Manager** in January 2004. Promoted to **Laboratory Director** in June 2004. Setup laboratory facility to develop commercial prototypes based on electrochemistry-based technologies transferred from Reveo and subsidiaries companies, i.e. eVionyx, on metal-air batteries and fuel cell, oxygen generation and removal and water desalination.
- Identified resources required and hired engineers and researchers to undertake research and product development projects. Established project teams, project management, intellectual property (IP) management and performance management tools. Established and implemented laboratory health and safety procedures.
- Co-developed technology assessment, intellectual property (IP) valuation, and product development procedures to ensure rigorous system in developing novel ideas into value added commercial products. Carried out technology assessment of existing and new technologies to validate IP strength, technology readiness, and potential market value.
- Verified and optimized performance of zinc-air standard size batteries, and innovated portable battery charger for mobile phones and other consumer electronic devices. Prepared business plan for commercialization of portable battery charger, and developed strategic plan for marketing, product, materials technology, and manufacturing development for the next 5 years (2006-2010).
- Completed technology feasibility of laboratory prototype for oxygen generation by electrochemical method up to 1.5 liter/min of oxygen at 95% purity. Electrode materials technology, design safety and cell optimization plans are identified as critical elements for product development stage.
- Developed new electrode materials, optimized cell design and built a prototype of PLC-controlled integrated modules for based on symmetrical electrical double layer capacitor concept for brackish water desalination. Proposed installation of a pilot plant for desalination of sea-water on a remote island off the coast of Terengganu to be powered by solar energy.
- Identified fundamental research projects at local universities for potential licensing to enhance technology and product portfolio.
- Prepared and presented technology presentations for potential investors and customers.

1997-2003 UCB Surface Specialties (M) Sdn Bhd, Seremban, Negeri Sembilan
Manager, Radcure Research - Asia

- Setup polymer synthesis, characterization, and application facilities for development of (meth)acrylated monomer and polymer for application in the inks and photoresists in fabrication of printed circuit boards and flat panel display.
- Design, setup, and commission of 1-ton pilot reactor for scaling up of new products.
- Identified needs, hired, developed and coached an R&D team to carry out product development projects from concept to pilot up-scaling leading to commercialization.
- Identified and licensed-in complimentary technology from Japan to increase competitiveness and penetration into liquid photoresist market for PCB and FPD mainly in Japan, China, Taiwan.
- Developed, scaled-up and commercialized 3 new carboxyl-functional (meth)acrylate resins for application in radiation curable etch resist inks for fabrication of single and double sided PCB.
- Developed, scaled up and commercialized 2 new epoxy (meth)acrylate/acrylic hybrid resins for liquid photoimageable solder mask application.
- Developed, and scaled up 2 new acrylic/epoxy (meth)acrylate hybrid resins for liquid photoresists used in etching of Cu circuit boards.
- Developed several new binder technology platforms for solvent & water-borne negative photoresists based on acrylic polymer, epoxy acrylate, urethane acrylate, and amino acrylate targeting to balance processing requirements, and final product requirements.
- Filed 5 patents in the field of radiation curing polymer for printed circuit board fabrication.
- Managed Intellectual Property portfolio for radiation curing technology in Asia. Active monitoring of competitive technology. Identify technology for licensing-in. Develop IP and patent strategy. Filed patents and published research disclosures. Reviewed corresponding patent applications in the US and Europe for potential coverage and utilization in Asia.
- Developed product promotion tools for commercialization of R&D results.
- Provided support to customers and technical service functions on trouble shooting of customers' problems.
- Developed departmental safety, health, environment, and quality systems and guidelines to ensure good working environments, and delivery of products meetings local, regional or global regulatory requirements, and per ISO9001 standard.
- Continuously collaborated with local institutions, and affiliated research groups worldwide in striving for technical excellence in solving customers' problem and product innovation.
- Actively undertaken and supervised university students' industrial training and final year projects by providing industrial placement and small research grant, respectively.

1995-1997 Motorola Semiconductor Sdn Bhd, Seremban, Negeri Sembilan.

Senior Materials Engineer, Core Technology Group

- Worked in a diverse technology team in trouble shooting and providing solution to the manufacturing departments.
- * Characterized root cause of failures on electronic packages through utilization of surface, organic, thermal, physical and elemental analysis methods. Proposed and developed prototype solutions to the problem by working closely with the materials supplier, and production & manufacturing engineers;
 - * poor solder wetting of insulated Cu wire for transformer in CATV package
 - * poor sealing of epoxy between AlN and alumina in RF-SOE package
 - * cracking of alumina substrate and plastic cover of CATV package
 - * poor adhesion of Si die onto Cu/Ni/Au metallization
 - * discoloration of Cu plated lead frame
 - * separation of solder during molding process.
- * Utilized competitive benchmarking processes to leapfrog the competition.
- * Investigated effect of manufacturing parameters and materials used in transfer molding process of electronic packages in improvement of cycle time, reduction of down time, and improvement in overall product quality. Proposed changes in manufacturing process, epoxy molding compounds and mold cleaning materials.
- * Evaluated effect of surface treatments on metals and modifications to the epoxy molding compounds to develop an optimized system to provide best adhesion between the molding compounds and metal leadframes in meeting JEDEC Level 1 standard.
- * Collaborated with external independent laboratories in materials characterization.
- * Developed plant-wide 5-years materials technology roadmap.
- * Plant-wide consultant to the process engineers in materials selection, behavior, interaction, characterization and analysis.
- * Plant-wide instructor for high interfacial integrity and mold technology.
- * 3 publications in materials characterization.

TEACHING RELATED EXPERIENCE

- 2014-Present** **Sr. Vice President, Research Management, CREST**
- Oct. 2015** EKC109 – Project Management for Chemical Engineers
 “Communication Skills of Problem Solving”, USM Chemical Engineering
- Sep. 2015** EKC451 – Process Design & Analysis
 “Design & Synthesis of Acrylate Resin for Electronics Application”, USM Chemical Engineering
- Mar. 2015** EKC453 – Plant Design & Economics
 ”Synthesis and production of epoxy acrylate for LED encapsulation application”, USM Chemical Engineering
- Nov 2014** EKC109 - Project Management for Chemical Engineers
 USM Chemical Engineering
- 1/04-6/06** **Director, Electrochemistry Laboratory, InventQjaya Sdn Bhd**
- Prepared and provided technology presentation to employees and potential investors, customers on
 - Safe Working Procedures in Laboratory and Manufacturing Facilities
 - Introduction to Electrochemistry, Metal Fuel Cell & Battery Technology, Electrochemical Oxygen Generation and Removal Technology, Electrical Double Layer Capacitor Water Desalination Technology
- 10/97-12/03** **R&D Manager, UCB Surface Specialties Sdn Bhd**
- Prepared and trained employees and customers on
 - Oligomer and Monomer Processes Technology for Radiation Curing Application
 - Introduction to Radiation Curing Technology
 - UV Curable Inks for Printed Circuit Board Application
 - Liquid Photoresists – Materials & Processes in Printed Circuit Board Fabrication
 - Cyclomer-P ACA Technology and Application
 - Negative Photoresists for Printed Wiring Board and Flat Panel Display Application – Technology Review and Path Forward
 - Radiation Curing in Opto-electronic Application
- 06/95-09/97** **Senior Materials Engineer, Motorola Semiconductor Sdn Bhd**
- Plant instructor for “Building High Interfacial Integrity”
 - Plant instructor for “Mold Technology”
- 01/95-05/95** **Post-doctoral Research Assistant, University of Rhode Island, USA**
- * Lecture in graduate level corrosion science and engineering courses
 - * Conducted laboratory session on corrosion testing methodologies

AWARDS & INVENTIONS

1990	American Institute of Chemist Award for Outstanding Senior in Chemical Engineering
1996	Silver Quill Award, Motorola Semiconductor Sdn Bhd
2000	US Patent 6,150,032 “Electroactive Polymer Coatings for Corrosion Control”; Corresponding EP 0837908-B1 (02-01-2003); Publications WO 97/03127 (1997), AT 230424T (2003)
2002	Patent Publication on “Improved Radiation Curable Compositions” WO 02/085962
2002	Patent Publications on “Radiation Curable Compositions” AU 2071002-A, EP 1340124-A2, WO 02/41078-A3, US 2004039100-A1, CN 1478218-A, CA 2429173-A1, MXPA 03004335-A
2003	Patent Publications on “Water Dilutable / Dispersible Radiation Curable Composition”, WO 03/095507-A1, and AU 2003239855
2003	Patent Publications on “Radiation Curable Compositions” AU 2003227739, and WO 03/095506-A1
2004	Silver Medal, Expo Science, Technology & Innovation 2004 “Renewable, environmental friendly, integrated electricity, potable water supply for coastal homes”; Provisional US patent application submitted.

PUBLICATIONS & PRESENTATIONS

- 2015 “Education for Hire – Transforming What and How We Learn for Employment”, OIC 4th Higher Education Conference 2015, Putra World Trade Center, 28-29th Oct. 2015
- 2015 Khoh Soo Beng, NorAzmi Alias, “Leveraging Technology For Smarter Manufacturing - World Class Electronic Manufacturing”, IBM Solutions Connect, One World Hotel, 10th Sep. 2015
- 2014 “Triple Helix Model in Developing Sustainable Talent Pipeline to Accelerate Economic Growth”, OIC 3rd Higher Education Conference 2014, 10-11th Nov. 2014, Putra World Trade Center, Kuala Lumpur
- 2014 “Triple Helix Model in Development of Sustainable Talent Pipeline to Accelerate Economic Growth – Case In Electrical and Electronic Sector”, Building a World-Class Engineering Faculty Forum 2014, 18-19th Nov. 2014, JW Marriott Hotel, Kuala Lumpur
- 2014 “Research, Innovation & Design Career Opportunities in Electrical and Electronic Sector”, Persidangan & Pameran Pengkomersilan MOSTI 2014, 13-15th Aug. 2014, Pusat Konvensyen Shah Alam
- 2013 “Nurturing Industry-Ready Graduates for E&E Sector through industry-Academia Partnership”, MyEULINK – The Ministry of Education Conference on “Graduate Employability & The Role of Higher Education – Opportunities and Challenges in the 21st Century”, Kuala Lumpur, 16th Dec 2013
- 2013 Plenary Talk on “Advancement in Printable Wearable Electronics – Accelerating Industry-Academia Collaboration through Cluster Development”, 1st International Conference on the Science & Engineering of Materials (ICoSEM) 2013, Kuala Lumpur, 13-14th Nov 2013
- 2013 Plenary Talk on “Accelerating Cluster Development through Industry-Academia Collaboration”, ASQED 2013 Symposium, Penang, 26-28th Aug 2013
- 2012 “Sustainable Talent Development for EE Sector”, ASEM Conference, Kuala Lumpur.
- 2011 “Cluster Development in E&E Sector”, UTM HICOE Workshop, Malacca. Ooi ChinChin, NorAzmi Alias, “Right Simulations for Right Design – P1 and Done”, accepted to NAFEMS World Congress, Boston, May 2011
- 2010 NorAzmi Alias, Hasniza Idris, “ECOMOTO: Journey Towards Sustainable World”, Presented at NRIC 2010, USM, 25 May 2010
- 2010 NorAzmi Alias, Ooi ChinChin, “Application of CAE and Six Sigma Methodologies in Design Right the First Time”, Presented at Universiti Malaya, Dept. of CAD/CAM Engineering, Industry Lecture Series, 22 Sep 2010
- 2009 Leaw Pang Tun, Goh Poh Imm, Wong Shaw Hwang, NorAzmi Alias, “Hardware productivity improvement through reduction of board passes – Do Differences Actions & experience from Barney ATEX 800”, Accepted to Motorola G&PS Virtual Engineering Symposium 2009

- 2008 NorAzmi Alias, Soh SuSiew, "Specialty Polymer in Mission Critical Application", Presented at 5th Specialty Elastomers & TPEs, Shanghai, 19-20th Nov 2008
- 2005 Tan J.S., M. N. Alias, T. Tsai, "Electrochemical Characteristics of microporous carbon cloths for electric double-layer capacitor performance", Extended Abstract, Carbon 2005
- 2004 Nor Faezah Mohamad Arif, S. Zakaria, M.A. Yarmo, N. Alias, "Chemical Modification of Chitosan with γ -butyrolactone – Part 2", Proceedings of the 3rd USM-JIRCAS Joint International Symposium, 9-11 March 2004
- 2003 Nor Faezah Mohamad Arif, S. Zakaria, M.A. Yarmo, N. Alias, "Chemical Modification of Chitosan with γ -butyrolactone", Proceedings of National Symposium on Science & Technology 2003, 28 – 30 July 2003
- 2001 N. Alias, J-P. Ravijst, "Effect of Formulation Composition on Alkaline Developability and Fine Line Resolution of Liquid Photoresist Systems", Radtech Asia 2001, Kunming, China, 15-18 May 2001
- 1997 M. Othman, Lim B-H., N. Alias, "Analysis of crack on CATV Alumina PCB", Proceedings of 1997 Summer Motorola AMT Symposium, Schaumburg, Illinois, USA, 23-24th July 1997
- 1997 M. Othman, Lim B-H., N. Alias, "Analysis of crack on CATV Alumina Printed Circuit Board", Proceedings of Nepcon Malaysia '97 Conference, PWTC, Kuala Lumpur, 18-20th June 1997
- 1997 A. Giaimo, M. N. Alias, R. Brown, "Metallic Nitrides for Corrosion Protection in Marine Environments: Theory Compared to Experiments", Paper No. 418, Proceedings of NACE Corrosion '97, New Orleans, LA, 14-19th March 1997
- 1996 R. Brown, M. N. Alias, "Prediction of Corrosion Resistance of Metallic Nitrides", Paper No. 540, Symposium of Environmental Aspects of Electrochemistry and Photoelectrochemistry, Electrochemical Society 189th Meeting, Los Angeles, California, 5-10th May 1996
- 1996 R. Brown, M. N. Alias, J. Qin, "Corrosion Fatigue Damage to Carbon Fiber Composites", Paper No. 107, Symposium on Environmental Degradation of Composite Materials, Electrochemical Society 189th Meeting, Los Angeles, California, 5-10th May 1996
- 1996 Racicot, R. J., R. L. Clark, H.B. Liu, **S. C. Yang**, M. N. Alias and **R. Brown**. "Thin Film Conductive Polymers on Aluminum Surfaces: Interfacial Charge-Discharge Transfer and Anticorrosion Aspects." In Optical and Photonic Applications of Electroactive and Conducting Polymers. (Proceedings of the SPIE - The International Society for Optical Engineering, Vol.2528) 1996. p.251-258.
- 1996 Racicot, R. J., R. L. Clark, H.B. Liu, **S. C. Yang**, M. N. Alias and **R. Brown**. "Anticorrosion Studies of Novel Conductive Polymer Coatings on Aluminum Alloys." IN: Electrical, Optical, and Magnetic Properties of Organic Solid State Materials III. Eds.: A. K. Jen, C. Y. Lee, L. R. Dalton, M. F. Rubner, G. E. Wnek and L. Y. Chang. Materials Research Society. (Materials Research Society Proceedings, Vol.413.) 1996. p.529-534.
- 1995 R. Brown, M. N. Alias, W. H. E. Reynolds, "The Effects of Various Chloride Environments on Degradation of a Carbon Fiber Composites",

- Paper No. 276, Proceedings of NACE Corrosion '95, Orlando, Florida, April 1995
- 1995 R. Brown, M. N. Alias, J. Qin, "The Influence of Fiber and Polymer Type on Degradation of Carbon Fiber Composites in the Marine Environment, Paper No. 275, Proceedings of NACE Corrosion '95, Orlando, Florida, April 1995
- 1995 P. Mukerji, G. Arora, L. Montez, M. N. Alias, R. Hall, "Scanning Acoustic Microscopy of Delamination in Semiconductor Packages", International Acoustic Microimaging Symposium, San Diego, November 1995
- 1994 R. Brown, M. N. Alias, "Oxidation of Nitride Films in Aqueous Solutions: Correlation between Surface Analysis and Electrochemical Studies", Paper No. 322, Proceedings of NACE Corrosion '94, Baltimore, Maryland, 27th February-4th March 1994
- 1994 W. H. E. Reynolds, R. Brown, M. N. Alias, "Comparison of Performance of a Carbon Fiber Composite Material in Distilled Water and Chloride Solutions", Paper No. 321, Proceedings of NACE Corrosion '94, Baltimore, Maryland, 27th February-4th March 1994
- 1993 M. N. Alias, R. Brown, "Impedance Spectroscopy of Composite Materials", Paper No. 360, Proceedings of NACE Corrosion '93, New Orleans, Louisiana, 7-12th March 1993
- 1993 M. N. Alias, R. Brown, "The Effect of Thickness and Process Parameters on Corrosion Behavior of ZrN and TiN Coatings in the Marine Environment", Paper No. 30, Proceedings of NACE Corrosion '93, New Orleans, Louisiana, 7-12th March 1993
- 1993 M. N. Alias, R. Brown, "Corrosion Behavior of Carbon Fiber Composites in the Marine Environment", Corrosion Science, v35 (1993), p.395-402
- 1993 R. Brown, M. N. Alias, R. Fontana, "The Effect of Composition and Thickness on Corrosion Behavior of TiN and ZrN Thin Films", Journal of Surface and Coatings Technology, v62 (1993), p.467-473
- 1992 M. Kane, M. N. Alias, J. Neely, R. Brown, "A Composite Pipe with Corrosion Protection", Proceedings of International Conference on Pipeline Reliability, Calgary, Alberta, Canada, 2-5th June, 1992
- 1992 M. N. Alias, R. Brown, "Damage to Composites from Electrochemical Processes", Corrosion, v48 (1992), p.373-378
- 1992 L. van Leaven, M. N. Alias, R. Brown, "Corrosion Behavior of Ion Plated and Implanted Films", Journal of Surface and Coatings Technology, v53 (1992), p.25-34
- 1991 D. Kaushik, M. N. Alias, R. Brown, "An Impedance Study of a Carbon Fiber / Vinyl Ester Composite", Corrosion, v47 (1991), p.859-867

PROFESSIONAL TRAINING

General Management

Goal Directed Project Management, November 1997
Managing Performance Through Leadership, October 2000
The Allen Programme for Management Leaders, September 2001
Management by Objectives, October 2001
Balanced Scorecard Implementation Workshop, July 2002
Appraisal Interview, October 2002
Achieving Results Through People, 2008
Motorola Progressing Leader Program, 2008-2009

Quality Management

Introduction to ISO 14001 Environmental Management System Standard, August 2002
Introduction to the Occupational Health & Safety (OHS 18001) Management System Standard, August 2002
OHSAS 18001 Risk Assessment, October 2002
Understanding ISO9000:2000, January 2003

Intellectual Property (IP) Management

Intellectual Property in the New Millenium Conference, IPTC, April 1999
Intellectual Property Rights, November 1999
Workshop on Patent and Industrial Design Law and Practice, MIPA, September 2001

Occupational Safety & Health

Risk Management of Hazardous Chemical Substances, SIRIM Bhd-JICA, December 1998
Introduction to Occupational Safety & Health – Guidelines on Storage of Hazardous Chemicals, DOSH-NSILC, April 2000
USECHH & CPL Regulations, JKPP Negeri Sembilan, March 2003

Integrated Circuit, Semiconductor Assembly & PCB Manufacturing

Practical Integrated Circuit Fabrication Seminar, ICE Corp., June 1995
Wirebond Technology, Motorola University, April 1996
Mold Technology, Motorola University, February 1996
Lead Finishing Technology, Motorola University, 1996
Semiconductor Leadframe Processing Training Program, Technic Inc., July 1996
Building High Integrity Interfaces in Semiconductor Packages, Motorola University, April 1997
Fabricating Advanced PWB's Using Build-up Technologies, Techlead Corporation, March 1999
Laser Materials Processing, Photomachining Inc., April 2000
Pitfalls and Roadblocks to the Implementation of Microvia Technology, Ciba Specialty Chemicals, March 1999
Stepping up to Flex – Bringing Flexible Circuitry to Your PWB Facility, Tessera, March 1999

Advanced Materials for Optical and Nano-technology, Fujitsu-MMU Shortcourse, July 2003

Analytical, Physical, Chemical Techniques & Problem Solving Tools

Failure Mode & Effect Analysis, Motorola University, 1996

8D Team Oriented Problem Solving, Motorola University, 1995

Design of Experiment, Motorola University, 1995

Workshop on X-ray Photoelectron Spectroscopy (XPS), UKM – Kratos, November 1996

HPLC in Bio-Medical Analysis, SUCXES Laboratory, UM, June 2003

REFERENCES

Dr. Hari Narayanan (direct supervisor @ Motorola Solutions Penang)
Managing Director, Penang Design Center
Motorola Solutions Malaysia Sdn Bhd
Hari.narayanan@motorolasolutions.com

Dr. Jan Vandendriessche (direct supervisor @ UCB Surface Specialties, Seremban)
Chief Growth Officer
Tessenderlo Group, Brussels

Dr. Lim Boon Huat (colleague @ Motorola Semiconductor, Seremban)
Manufacturing Director
Infineon Technologies (M) Sdn Bhd, Malacca
boon-huat.lim@infineon.com