

## Selected Publications (Dr. Lloyd H. Hihara)

- Atul Tiwari, Ryan Sugamoto and L.H. Hihara “Analysis of Molecular Morphology and Permeation Behaviour of Polyimide-Siloxane Molecular Composite for their Possible Anticorrosive Coating Application.” Submitted to Progress in Organic Coatings, 2005.
- L.H. Hihara, T.S. Devarajan, Hongbo Ding, and G.A. Hawthorn “Corrosion Initiation and Propagation in Particulate Aluminum-Matrix Composites,” paper 06T028, 2005 Tri Service Corrosion Conference, November 14 – 18, 2005, Orlando, Florida.
- R.P.I. Adler and D.J. Snoha, G.A. Hawthorn and L.H. Hihara “Characterization of Environmentally Exposed Aluminum Metal Matrix Composite Corrosion Products as a Function of Volume Fraction and Reinforcement Specie” paper 06T0292005, Tri Service Corrosion Conference, November 14 – 18, 2005, Orlando, Florida.
- H. Ding and L. H. Hihara “Electrochemical Behavior of Boron Carbide and Galvanic Corrosion of Boron Carbide Reinforced 6092 Aluminum Composites” Electrochemical Society, 208<sup>th</sup> ECS meeting, Los Angeles, CA, Oct 16-21, 2005.
- Hongbo Ding, L.H. Hihara “Localized Corrosion Currents and pH Profile over B<sub>4</sub>C, SiC and Al<sub>2</sub>O<sub>3</sub> Reinforced 6092 Aluminum Composites I. In 0.5M Na<sub>2</sub>SO<sub>4</sub> Solution,” Journal of the Electrochemical Society, Vol. 152, No. 4, 2005.
- L.H. Hihara “Corrosion of Metal Matrix Composites,” chapter in ASM Handbook Vol. 13B: Corrosion: Materials, Environments, and Industries,” American Society of Metals International, 2005.
- L.H. Hihara “Chapter 57 - Metal-Matrix Composites,” in the ASTM Manual on Corrosion Tests and Standards: Application and Interpretation, Second Edition, American Society for Testing and Materials International, 2005.
- Hongbo Ding and L. H. Hihara “Localized Corrosion Currents and pH Profile over B<sub>4</sub>C, SiC And Al<sub>2</sub>O<sub>3</sub> Reinforced 6092 Aluminum Composites in Artificial Seawater, in *Corrosion in Marine and Saltwater Environments II*, D.A. Shifler, T. Tsuru, P.M. Natishan, and S. Ito, Editors, PV 2004-14, The Electrochemical Society Proceedings Series, Honolulu, HI, 2004.
- L. H. Hihara “Anodic and Cathodic Models for Interpreting Polarization Behavior of Ceramic-Coated Substrates Containing Pre-existing Coating Breaches,” Corrosion Engineering Science and Technology, Vol. 39, No. 2, 2004, p. 143 - 151.
- L.H. Hihara, A.S. Iwane, R.E. Rocheleau, “Polarization Behavior and Corrosion-Initiation Mechanisms of Molybdenum Coated With Amorphous Hydrogenated Silicon Alloy Thin Ceramic Films,” Corrosion Engineering Science and Technology, Vol. 39, No. 4, 2004, p. 277 – 286.
- T. Arasu Govindaraju, L.H. Hihara “Systematic Testing and Analysis of Corrosion at 6061-T6 Aluminum and Organic-Matrix Composite Interfaces,” Eight Japan International SAMPE Symposium and Exhibition, Tokyo, Japan, 18 – 21 November 2003.
- L.H. Hihara, Hongbo Ding, Z.J. Lin “The Formation of Anodic and Cathodic Corrosion Sites on Aluminum Metal-Matrix Composites,” Eight Japan International SAMPE Symposium and Exhibition, Tokyo, Japan, 18 – 21 November 2003.
- L.H. Hihara “Chapter 57 - Metal-Matrix Composites,” in the ASTM Manual on Corrosion Tests and Standards: Application and Interpretation, Second Edition, American Society for Testing and Materials International, accepted, 2003.
- L.H. Hihara, P. Panquites, IV “The Potential of Electrochemical Machining for Silicon Carbide/Aluminum Metal-Matrix Composites,” Abrasives and Grinding Magazine, December/January 2003, p. 12 - 17.
- R.M. Latanision, L.H. Hihara “Applications and Special Corrosion Concerns Regarding Metal-Matrix Composites,” 15th International Corrosion Congress, Granada, Spain, September 23 - 27, 2002.
- L. A. Gintert, L. H. Hihara “Corrosion Considerations for Military Applications of Composite Material Systems,” CORROSION/2002, National Associate of Corrosion Engineers, April 7–11, 2002, Denver, CO.
- L.H. Hihara, A.S. Iwane, J.J. Yamane, R.E. Rocheleau “Polarization Behavior and Corrosion-Initiation Mechanisms of Mo Coated with Amorphous Hydrogenated Silicon Alloy Thin Ceramic Films,” 2002 Tri-Service Corrosion Conference, San Antonio, TX, January 14 – 18, 2002.

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- L.H. Hihara "Corrosion Mechanisms of Metal-Matrix Composites," Seventh Japan International SAMPE Symposium and Exhibition, Tokyo, Japan, 13 – 16 November 2001.
- L.H. Hihara, Z.J Lin "Corrosion of Silicon/Aluminum Metal-Matrix Composites," Sixth Japan International SAMPE Symposium and Exhibition, Tokyo, Japan, 26 - 29 October 1999.
- L.H.Hihara, A. Iwane, S. Voss, R.E. Rocheleau, and Z.E. Zhang "Initiation of Corrosion in Metal Substrates Coated with Plasma-Deposited Hydrogenated Amorphous Silicon Alloy Thin Films," Corrosion Science, Vol. 41, pp. 1403 – 1417,1999.
- L.H. Hihara, and P. Panquites, IV "Electrochemical Machining of Silicon Carbide/Aluminum Metal-Matrix Composites," Fifth Japan International SAMPE Symposium and Exhibition, Tokyo, Japan, 28 - 30 October 1997 (invited).
- L.H. Hihara "Corrosion of Aluminum Matrix Composites," Corrosion Reviews, Volume 15, Nos. 3-4, 1997.
- L.H. Hihara "Corrosion of Metal Matrix Composites," chapter in Manual on Corrosion Tests and Standards: Application and Interpretation, American Society for Testing and Materials (ASTM), 1995.
- L.H. Hihara and C. Tamirisa "Corrosion of SiC Monofilament/Ti-15-3-3-3 Metal-Matrix Composites in 3.15 wt% NaCl," Materials Science and Engineering A, Vol. A198, Nos. 1-2, 1995.
- L.H. Hihara and R.M. Latanision "Corrosion of Metal Matrix Composites," International Materials Review, Vol. 39, No. 6, 1994.
- L.H. Hihara and P.K. Kondepudi "Galvanic Corrosion between SiC Monofilament and Magnesium in NaCl, Na<sub>2</sub>SO<sub>4</sub>, and NaNO<sub>3</sub> Solutions for Application to Metal-Matrix Composites," Corrosion Science, Vol. 36, No. 9 p.p. 1585 - 1595, 1994.
- R.E. Rocheleau, Z.E. Zhang, A. Iwane, L.H. Hihara "Effect of Hydrogen Bonding Characteristics on the Corrosion of Plasma Deposited Silicon Nitride Films," Journal of the Electrochemical Society, 1994, Vol. 141, No. 7, pp. 1938 - 1943, 1994.
- L.H. Hihara, R. Bregman, and P.K. Takahashi "Marine Applications for Advanced Composite Materials," Proceedings of the International Conference on Advanced Composites, ed. by T. Chandra, and A.K. Dhingra, Wollongong, Australia, 15-19 February 1993, The Metals, Mineral and Materials Society, p. 95.
- L.H. Hihara and P.K. Kondepudi "Galvanic Corrosion of SiC Monofilament/ZE41 Mg Metal-Matrix Composites in 0.5 M NaNO<sub>3</sub>," Corrosion Science, Vol. 34, No. 11, pp. 1761-1772, 1993.
- L.H. Hihara and R.M. Latanision "Suppressing Galvanic Corrosion in Graphite/Aluminum Metal-Matrix Composites," Corrosion Science, Vol. 34, No. 4, pp. 655 - 665, 1993.
- L.H. Hihara and R.M. Latanision "Galvanic-Corrosion of Aluminum Matrix Composites," Corrosion, Vol. 48, No. 7, pp. 546-552, 1992.
- L.H. Hihara and R.M. Latanision "Localized Corrosion Induced in Graphite/Aluminum Metal-Matrix Composites by Residual Microstructural Chloride," Corrosion, Vol. 47, No.5, 1991, p. 335.
- M. Buonanno, R.M. Latanision, L.H. Hihara, and J.F. Chiang "Corrosion of Graphite/Aluminum Metal-Matrix Composites," in Environmental Effects on Advanced Materials, ed. by R.H. Jones and R.E. Ricker, The Minerals, Metals and Materials Society, 1991.
- L.H. Hihara and R.M. Latanision "Residual Microstructural Chloride in Graphite/Aluminum Metal-Matrix Composites," Materials Science and Engineering A, A126, 1990, p. 231.
- L.H. Hihara and R.M. Latanision "Cathodic Overprotection of Silicon Carbide/6061 T6 and Graphite/6061 T6 Aluminum Alloy Metal-Matrix Composites," Scripta Metallurgica, Vol. 22, 1988.