

MAKHLouF M. MAKHLouF

LIST OF PUBLICATIONS – UPDATED 08/24/2010

1. A. Mandal and M.M. Makhlof, "Chemical Modification of the Morphology of the Mg₂Si Phase in Hypereutectic Aluminum-Silicon-Magnesium Alloys," *Int. J. Cast Metal Res.*, 2010.
2. M. Makhlof, "On the Mechanism of Modification of the Aluminum-Silicon Eutectic by Strontium: the role of nucleation," *Int. J. Metal Casting*, vol. 4, no. 1, pp. 47-50, 2010.
3. A. Mandal and M.M. Makhlof, "Development of a Novel Hypereutectic Aluminum-Silicon-Magnesium Alloy for Die Casting," *Transactions of the Indian Institute of Metals*, vol. 62, No. 4-5, pp. 357-360, 2009.
4. Virendra S. Warke, Richard D. Sisson, Jr., and Makhlof M. Makhlof, "FEA Model for Predicting the Response of Powder Metallurgy Steel Components to Heat Treatment," *J. Mat. Sci. and Engg. A*, vol. 518, pp. 7-15, 2009.
5. Virendra S. Warke, Richard D. Sisson, Jr., and Makhlof M. Makhlof, "The Effect of Porosity on the Austenite to Bainite Transformation in Powder Metallurgy Steels," *J. Mater. Res.*, vol. 24, no. 10, pp. 3213-3219, October 2009.
6. Virendra S. Warke and Makhlof M. Makhlof, "Mathematical Modeling of Heat Treating Powder Metallurgy Steel Components," *La Metallurgia Italiana*, pp. 1-6, June 2009.
7. V. Warke, R.D. Sisson, Jr., and M.M. Makhlof, "A Model for Converting Dilatometric Strain Measurements to the Fraction of Phase Formed during the Transformation of Austenite to Martensite in Powder Metallurgy Steels," *Metall. and Mater. Trans.*, vol. 40A, no. 2, pp. 569-572, March 2009.
8. L. Wang, D. Apelian, and M.M. Makhlof, "Optimization of Aluminum Die Casting Alloys for Enhanced Properties," *Mater. Sci. Forum*, vol. 618-619, pp. 601-605, 2009.
9. N. Tonmukayakul, S. Shankar, and M.M. Makhlof, "Characterization of the Flow Behavior of Near Eutectic Composition Aluminum-Silicon Alloys," *Int. J. Cast Metals*, vol. 3, pp. 7, 2009.
10. K. Symeonidis, D. Apelian, and M.M. Makhlof, "Controlled Diffusion Solidification: Application to Metal Casting," *Metall. Sci. and Tech.*, vol. 26-1, pp. 30-36, 2008.

11. L. Wang, D. Apelian, M.M. Makhlof, W. Hwang, "Predicting Compositions and Properties of Aluminium Die Casting Alloys using an Artificial Neural Network," *Metal. Sci. and Tech.*, vol. 26-1, pp. 16-21, 2008.
12. K. Symeonides, D. Apelian, and M.M. Makhlof, "Controlled Diffusion Solidification," *International Foundry Research/Giessereiforschung*, Vol. 60, No. 1, pp. 30-36, 2008.
13. J. Deshpande and M.M. Makhlof, "The Effect of Mechanical Mold Vibrations on the Characteristics of Aluminum Casting Alloys," *AFS Transactions*, paper No. 08-104, May, 2008.
14. D. Apelian, M.M. Makhlof, and D. Saha, "CDS Method for Casting Aluminum-Based Wrought Alloy Compositions: theoretical framework," *Mater. Sci. Forum*, vol. 519-521, pp. 1771-1776, 2006.
15. V. Warke, G. Tryggvason, and M.M. Makhlof, "Mathematical Modeling and Computer Simulation of Molten Metal Cleansing by the Rotating Impeller Degasser – Part I: Fluid Flow," *J. Materials Processing Technology*, vol.168, pp. 112-118, 2005.
16. V. Warke, S. Shankar, and M.M. Makhlof, "Mathematical Modeling and Computer Simulation of Molten Metal Cleansing by the Rotating Impeller Degasser – Part II: Removal of Hydrogen gas and Solid particles," *J. Materials Processing Technology*, vol.168, pp. 119-126, 2005.
17. T.W. Spence and M.M. Makhlof, "Characterization of the Operative Mechanism in Potassium Fluoborate Activated Pack Boriding of Steels" *J. Materials Processing Technology*, vol.168, pp. 127-136, 2005.
18. S. Shankar, Y.W. Riddle, and M.M. Makhlof, "Communication: Discussion of "Nucleation Mechanism of Eutectic Phases in Aluminum-Silicon Hypoeutectic Alloys - Authors' Reply," *Metall. and Mater. Trans.*, vol. 36A, pp. 1612-1617, June 2005.
19. M.M. Makhlof, S. Shankar, and Y.W. Riddle, "Mechanisms of Formation and Chemical Modification of the Morphology of the Eutectic Phases in Hypoeutectic Aluminum-Silicon Alloys," *AFS Transactions*, paper No. 05-088(02), April 2005.
20. Sumanth Shankar, Yancy W. Riddle, and Makhlof M. Makhlof, "Eutectic Solidification of Aluminum-Silicon Alloys," *Metall. and Mater. Trans.*, vol. 35A, pp. 3038-3043, September 2004.

21. Sumanth Shankar, Yancy W. Riddle, and Makhlouf M. Makhlouf, "Nucleation Mechanism of the Eutectic Phases in Aluminum-Silicon Hypoeutectic Alloys," *Acta Mater.*, vol. 52, no. 15, pp. 4447-4460, August 2004.
22. Deepak Saha, Sumanth Shankar, Diran Apelian, and Makhlouf M. Makhlouf, "Casting of Aluminum-Based Wrought Alloys Using Controlled Diffusion Solidification," *Metall. and Mater. Trans.*, vol. 35A, pp. 2174-2180, July 2004.
23. S. Shankar, Y. Riddle, and M.M. Makhlouf, "Focused Ion Beam Milling: A Practical Method for Preparing Cast Al-Si Alloy Samples for Transmission Electron Microscopy," *Metall. and Mater. Trans.*, vol. 34A, pp. 705-707, March 2003.
24. M.M. Makhlouf and H.V. Guthy, "The Aluminum-Silicon Eutectic Reaction: Mechanisms and Crystallography," *J. Light Metals*, vol. 2, No. 1, pp. 199-218, May 2002.
25. M. Dash and M. Makhlouf, "Effect of Key Alloying Elements on the Feeding Characteristics of Aluminum-Silicon Casting Alloys," *J. Light Metals*, vol. 2, No. 1, pp. 251-265, May 2002.
26. M. Maniruzzaman and M. Makhlouf, "Mathematical Modeling and Computer Simulation of the Rotating Impeller Particle Flotation Process – Part I: Fluid Flow," *Metall. and Mater. Trans.*, vol. 33B, pp. 297-303, April 2002.
27. M. Maniruzzaman and M. Makhlouf, "Mathematical Modeling and Computer Simulation of the Rotating Impeller Particle Flotation Process – Part II: Particle Agglomeration and Flotation," *Metall. and Mater. Trans.*, vol. 33B, pp. 305-314, April 2002.
28. J.M. Olson and M.M. Makhlouf, "Grain Growth at the Free Surface of WC-Co Materials," *J. Mater. Sci.*, vol. 36, No. 12, pp. 3027-3033, June 2001.
29. C.H. Cáceres, M.M. Makhlouf and D. Apelian, "Quality Index Chart for Different Alloys and Temperatures: A Case Study on Aluminum Die Casting Alloys," *J. Light Metals*, vol. 1, No. 1, pp. 51-59, 2001.
30. J.M. Olson and M.M. Makhlouf, "Characterization of the Kinetic and Mechanistic Differences between Free Surface and Bulk Grain Growth in WC-Co Materials," *Metall. and Mater. Trans.*, vol. 32A, pp. 1261-1270, June 2001.
31. M.I. Pech-Canul and M.M. Makhlouf, "Processing of Al-SiC_p Metal Matrix Composites by Pressureless Infiltration of SiC_p Preforms," *J. Materials Synthesis and Processing*, vol. 8, No. 1, pp. 37-55, 2000.

32. M. Makhlouf, D. Apelian, and L. Wang, "Aluminum Die Casting of 380 Type Alloys – A Review," *Aluminum Transactions*, vol. 2, No. 2, pp. 239-256, July 2000.
33. M.I. Pech-Canul, R.N. Katz, S. Pickard, and M.M. Makhlouf, "The Role of Silicon in Wetting and Pressureless Infiltration of SiC_p Preforms by Aluminum Alloys," *J. Mater. Sci.*, vol. 35, No. 9, pp. 2167-2173, May 2000.
34. M.I. Pech-Canul, R.N. Katz, and M.M. Makhlouf, "Optimum Parameters for Wetting Silicon Carbide by Aluminum Alloys," *Metall. and Mater. Trans.*, vol. 31A, pp. 565-573, February 2000.
35. M.I. Pech-Canul, R.N. Katz, and M.M. Makhlouf, "Optimum Parameters for Pressureless Infiltration of SiC_p Preforms by Aluminum Alloys," *J. Materials Processing Technology*, vol.108, pp. 68-77, 2000.
36. S. Chou and M. Makhlouf, "The Effect of Ion Implanting on Hydrogen Entry into Metals," *Metall. and Mater. Trans.*, vol. 30A, pp. 1535-1540, June 1999.
37. C.H. Cáceres, L. Wang, D. Apelian and M. Makhlouf, "Alloy Selection for Die-Castings Using the Quality Index," *AFS Transactions*, vol. 146, pp. 239-247, 1999.
38. C. Walsh, M. Carroll, and M. Makhlouf, "Determination of the Effective Interfacial Heat Transfer Coefficient between Metal Molds and Aluminum Alloy Castings," *AFS Transactions*, vol. 146, pp. 307-314, 1999.
39. L. Wang, D. Apelian, and M. Makhlouf, "Iron-Bearing Compounds in Al-Si Die-Casting Alloys: Their morphology and conditions under which they form," *AFS Transactions*, vol. 146, pp. 231-238, 1999.
40. M. Makhlouf, L. Wang, and D. Apelian, "Thermal Conductivity of Aluminum Die Casting Alloys," *AFS Transactions*, vol. 146, pp. 501-505, 1999.
41. L. Wang, D. Apelian and M. Makhlouf, "Fatigue Properties of Aluminum Die Casting Alloys," *AFS Transactions*, pp. 155-161, 1998.
42. L. Wang, M. Makhlouf, and D. Apelian, "Aluminum Die-Casting Alloys - Alloy Composition, Microstructure, and Properties/Performance Relationship," *Int. Materials Reviews*, vol. 40, No. 6, pp. 221-238, 1995.
43. S. Shivkumar, X. Yao and M. Makhlouf, "Polymer-Melt Interactions During Casting Formation in the Lost Foam Casting Process," *Scripta Metall.*, vol. 33, No. 1, pp. 39-46, 1995.

44. L. Wang, M. Makhlouf, D. Apelian, "The Effect of A380 Alloy Chemistry on its Microstructure and Mechanical Properties," *AFS Transactions*, vol. 103, pp. 675-681, 1995.
45. Q. Yu, M. Makhlouf and D. Apelian, "Effect of Stress Acting upon the Solid Network in the Two-Phase Zone during Solidification," *Int. J. of Heat and Mass Transfer*, vol.38, No. 1, pp. 31-38, 1995.
46. S. Shivkumar, J. Courneyer and M. Makhlouf, "In Situ Production of Ceramic Reinforcements in Metallic Parts by Thermal Degradation of Organometallics," *Scripta Metall.*, vol. 29, pp. 439-444, 1993.
47. M.M. Makhlouf and R.D. Sisson, Jr., "Modeling Surface Effects on Hydrogen Diffusion in Metals," *Metall. and Mater. Trans.*, vol.22A, No. 5, pp. 1001-1006, May 1991.
48. M.M. Makhlouf, R. R. Biederman and R. D. Sisson, Jr., "The Effect of Microstructure and Surface Condition on Hydrogen Permeation in AISI 4340 Steel," *J. Microstructural Science*, vol.17, pp. 515-521, 1989.
49. M.M. Makhlouf and R.D. Sisson, Jr., "A Limited Mass Transfer Model for the Effects of Water Vapor on Hydrogen Permeation in Stainless Steels," *Scripta Metall.*, vol.22, No. 10, pp. 1645-1649, 1988.
50. M.M. Makhlouf, A. Mauid and H.D. Merchant, "Sintering of Chemically Preconditioned Tin Powders," *Int. J. of Powder Metallurgy and Powder Technology*, vol.15, No. 3, pp. 231-237, 1979.
51. L. Wang, D. Apelian, and M.M. Makhlouf, "Dynamic Properties of High Performance Die Casting Alloys," Proc. of CastExpo 2010, published by NADCA, Wheeling, IL, March 2010.
52. Chang-Kai Wu, Makhlouf M. Makhlouf, "Predicting Residual Stresses Caused by Heat Treating Cast Aluminum Alloy Components," Proc. of 113th TMS Annual Meeting, pp. 173-180, San Francisco, California, 2009.
53. A. Mandal and M.M. Makhlouf, "Microstructure and Mechanical Properties of Cast Hypereutectic Al-Si Alloys with High Magnesium Content," *Aluminum Alloys: Fabrication, Characterization and Applications*, W. Yin and Z. Long eds., Proc. of 113th TMS Annual Meeting, pp. 57-62, San Francisco, California, 2009.
54. L. Wang, D. Apelian, M.M. Makhlouf, W. Hwang, "Predicting Compositions and Properties of Aluminium Die Casting Alloys using an Artificial Neural Network," Proceedings of the 4th International Conference on High Tech Die Casting, Brescia, Italy, May 7, 2008.

55. Virendra S. Warke and Makhlouf M. Makhlouf, "Mathematical Modeling of Heat Treating Powder Metallurgy Steel Components," Proceedings of the International Conference on Innovation in Heat Treatment for Industrial Components, Verona, Italy, June 2008.
56. Virendra S. Warke, Richard D. Sisson, Jr., and Makhlouf M. Makhlouf, "Predicting the Effects of Heat Treatment on Pressed and Sintered Steel Parts," Proceedings of the 2008 International Congress on Powder Metallurgy and Particulate Materials, Washington DC, June 2008.
57. K. Simeonydes, D. Apelian, and M.M. Makhlouf, "Controlled Diffusion Solidification: Application to Metal Casting," Proceedings of the Eighth International Conference on High Tech Die Casting, Montichiari, Brescia, Italy, pp., April 2008.
58. J. Deshpande and M.M. Makhlouf, "The Effect of Mechanical Mold Vibration on the Casting Characteristics of Aluminum-Copper Alloys," Proceedings of the 2007 International Symposium on Liquid Metal Processing and Casting, P.D. Lee et al. eds., Societe Francaise de Metallurgie et des Materiaux, pp. 319-325, Nancy, France, September 2007.
59. V. Warke, Sisson, Jr., "Predicting the Effects of Heat Treatment on Powder Metallurgy Components," Heat Treating Progress, pp. 10-11, May 2007.
60. V. Warke and M.M. Makhlouf, "Hydrogen Removal from Molten Metal: Mathematical Modeling and Computer Simulations," Modeling of Casting Welding and Advanced Solidification Processes -XI, Charles-Andre' Gandin and Michel Bellet eds., TMS International, Warrendale, PA, pp. 1097-1104, Opio, France, May 2006.
61. V.S. Warke, R.D. Sisson, Jr., and M.M. Makhlouf, "Effect of Porosity on the Transformation Kinetics of P/M Steels," Proceedings of PM2Tech, Montreal, Canada, pp. 85-99, June 2005.
62. Makhlouf M. Makhlouf and Sumanth Shankar, "The Mechanism of Eutectic Nucleation in Hypoeutectic Al-Si Alloys Applied to the Design of New Casting Alloys," Proceedings of the Second International Light Metals Technology Conference, H. Kaufmann ed., St. Wolfgang, Austria, pp. 21-26, June 2005.
63. Q.Y. Pan, L. Wang, D. Apelian, and M.M. Makhlouf, "Optimization of 380 Alloy for Semi-Solid Processing," Proceedings of CastExpo 2005, published by NADCA, Wheeling, IL, April 2005.
64. W.J. Bernard III, Q. Pan, D. Apelian, and M. Makhlouf, "The Continuous Rheoconversion Process (CRP): Modeling and Optimization," Proceedings of

CastExpo 2005, published by NADCA, Wheeling, IL, April 2005.

65. S. Shankar, Y. Riddle, and M.M. Makhlof, "Mechanism of Eutectic Solidification of Aluminum-Silicon Alloys," Proceedings of *Shape Casting – The John Campbell Symposium*, edited by P. Crepeau and M. Tiryakioglu, TMS International, Warrendale, PA, pp. 135-144, February 2005.
66. S. Shankar, Y. Riddle, and M.M. Makhlof, "Chemical Modification of the Morphology of the Eutectic Phases in Hypoeutectic Aluminum-Silicon Alloys," Proceedings of *Shape Casting – The John Campbell Symposium*, edited by P. Crepeau and M. Tiryakioglu, TMS International, Warrendale, PA, pp. 145-154, February 2005.
67. Deepak Saha, Sumanth Shankar, Diran Apelian, and Makhlof M. Makhlof, "Controlled Diffusion Solidification – Manufacturing Net Shaped Al-Based Wrought Alloys," Proceedings of *Shape Casting – The John Campbell Symposium*, edited by P. Crepeau and M. Tiryakioglu, TMS International, Warrendale, PA, pp. 415-422, February 2005.
68. Virendra S. Warke, Jack Yuan, Mohamed Maniruzzaman, Makhlof M. Makhlof, and Richard D. Sisson, Jr., "Modeling the Heat Treatment of Powder Metallurgy Steels," Proceedings of the 2004 International Conference On Powder Metallurgy & Particulate Materials, Chicago, IL, June 2004.
69. R.D. Sisson Jr., M.D. Maniruzzaman, S. Ma, V.S. Warke, and M.M. Makhlof, "Quenching Powder Metallurgy Products," Proceedings of the 2004 International Conference On Powder Metallurgy and Particulate Materials, Chicago, IL, June 2004, part-6, pp. 1-11.
70. Q. Pan, D. Apelian, and M. Makhlof, "AlB₂ Grain Refined Al-Si Alloys: Rheocasting/Thixocasting Applications," Proceedings of the Eighth International Conference on Semi-Solid processing of Metals and Alloys, Limasol, Cyprus, Session No. 13, paper No. 1, September 2004.
71. S. Shankar, D. Saha, D. Apelian, and M.M. Makhlof, "CDS: Controlled Diffusion Solidification - A Novel Casting Approach," Proceedings of the Eighth International Conference on Semi-Solid processing of Metals and Alloys, Limasol, Cyprus, session No. 16, paper No. 2, September 2004.
72. Suamant Shankar, Yancy Riddle, and Makhlof M. Makhlof, "The Role of Iron in the Nucleation of Eutectic Silicon in Hypoeutectic Aluminum-Silicon Alloys," in *Solidification of Aluminum Alloys*, edited by M.G. Chu, D. Granger, and Q. Han, TMS International, Warrendale, PA, pp. 103-109, September 2004.
73. S. Shankar, M.M. Makhlof, "Die Soldering and Die Engineering in High Pressure Die Casting Operations," Proceedings of the Second International

Conference on High Tech Die Casting – Processing of Light and Heavy Alloys, Montichiari, Brescia, Italy, pp. 97-106, April 2004.

74. D. Apelian, Q.Y. Pan, M. Findon, and M.M. Makhlof, "Low Cost and Energy Efficient Methods for the Manufacture of Semi-Solid Feedstock," Proceedings of the Second International Conference on High Tech Die Casting – Processing of Light and Heavy Alloys, Montichiari, Brescia, Italy, pp. 323-332, April 2004.
75. M.M. Makhlof, L. Wang, and D. Apelian, "iSelect-Al - *an electronic tool for the selection and design of aluminum die casting alloys*," Die Casting Engineer, pp. 26-31, March 2004.
76. Sumanth Shankar, Deepak Saha, Diran Apelian, and Makhlof M. Makhlof, "Casting of Aluminum-based Wrought Alloys," Die Casting Engineer, pp. 52-57, March 2004.
77. John Jorstad, Diran Apelian, and Makhlof M. Makhlof, "Novel Slurry-Based Semi Solid Processing Routes," Proceedings of the First International Light Metals Technology Conference, edited by A. Dahle, pp. 109-114, Brisbane, Australia, September 2003.
78. Diran Apelian and Makhlof M. Makhlof, "The Metal Processing Institute at WPI: An Example of a Successful Industry/University Alliance," Proceedings of the First International Light Metals Technology Conference, edited by A. Dahle, pp. 21-26, Brisbane, Australia, September 2003.
79. Makhlof M. Makhlof, Diran Apelian, Libo Wang, and Paul Kennedy, "Aluminum Die Casting Alloys: Chemistry-Microstructure-Properties Interactions," Proceedings of the First International Light Metals Technology Conference, edited by A. Dahle, pp. 191-194, Brisbane, Australia, September 2003.
80. Makhlof M. Makhlof, Diran Apelian, Sujoy Chadhury, and Charles Bergman, "Heat Treatment of Aluminum Cast Components in Fluidized Beds," Proceedings of the First International Light Metals Technology Conference, edited by A. Dahle, pp. 371-376, Brisbane, Australia, September 2003.
81. V. Warke and M. Makhlof, "Inclusion Removal from Molten Metals by Particle Flotation – A Mathematical Model and Computer Simulations," Proceedings of the Tenth Conference on Modeling of Casting, Welding and Advanced Solidification Processes, edited by D. Stefanescu et al, pp. 599-606, Sandestin, Florida, May 2003.
82. V. Warke, Md. Maniruzzaman, and M. Makhlof, "Computer Simulation of the Removal of Solid Particles from Molten Aluminum in the Rotating Impeller

Degasser," Light Metals Proceedings, edited by P. Crepeau, The 132nd TMS Annual Meeting, pp. 893-899, San Diego, California, March 2003.

83. Y.W. Riddle and M.M. Makhlof, "Characterizing Solidification by Non-Equilibrium Thermal Analysis," Magnesium Technology 2003, edited by H.I. Kaplan, The 132nd TMS Annual Meeting, pp. 101-106, San Diego, California, March 2003.
84. D. Apelian, M. Makhlof, J. Rosendahl, and C. Bergman, "Fluidized Beds: An Energy Efficient Alternative to Conventional Heat Treatment Operations," Proceedings of The MPMD Fourth Global Innovations Symposium: Energy Efficient Manufacturing Processes," edited by I. Anderson, T. Marechaux, and C. Cockrill, The 132nd. TMS Annual Meeting, pp. 3-13, San Diego, California, March 2003.
85. D. Apelian, A.F. deFigueredo, and M. Makhlof, "Energy Efficient Near-Net Shape Manufacturing: Semi-Solid Processing Routes," Proceedings of The MPMD Fourth Global Innovations Symposium: Energy Efficient Manufacturing Processes," edited by I. Anderson, T. Marechaux, and C. Cockrill, The 132nd. TMS Annual Meeting, pp. 55-62, San Diego, California, March 2003.
86. M. Findon, A.M. deFegeredo, D. Apelian, and M. Makhlof, "Melt Mixing Approaches for the Formation of Thixotropic Semi-Solid Metal structures, Proceedings of The Seventh International Conference on Semi-Solid Processing of Alloys and Composites, pp. 557-562, Tsukuba, Japan, September 2002.
87. H.V. Guthy, S. Shankar, and M.M. Makhlof, "Variation in Hydrogen Content of Al-Si Hypoeutectic Melts with Strontium Addition," Proceedings of the Sixth International Conference on Molten Aluminum Processing, pp. 177-186, November 2001.
88. M.M. Makhlof, D. Apelian, and L. Wang, "Sludge Formation Tendency of Selected Aluminum Die Casting Alloys," Proceedings of the Twenty First International Die Casting Congress, pp. 265-271, October 2001.
89. M.I. Pech Canul, R.N. Katz and M.M. Makhlof, " The Combined Role of Nitrogen and Magnesium in Wetting Ceramics by Aluminum Alloys," Proceedings of the XXII Congreso Internacional de Metalurgia y Materiales, pp. 232-241, Saltillo Coahuila, Mexico, November 2000.
90. M.I. Pech-Canul and M.M. Makhlof, "Optimized Processing of Al-SiC Metal Matrix Composites by Pressureless Infiltration of SiC Preforms," State of the Art in Cast Metal Matrix Composites in the Next Millennium, ASM International, P.K. Rohatgi, ed., pp. 173-188, October 2000.

91. M.I. Pech-Canul and M.M. Makhlof, "Optimized Wetting of Silicon Carbide by Aluminum Alloys," State of the Art in Cast Metal Matrix Composites in the Next Millennium, ASM International, P.K. Rohatgi, ed., pp. 115-127, October 2000.
92. M. Makhlof, L. Yang, L. Wang, and D. Apelian, "Elevated Temperature Tensile Properties of Aluminum Die-Casting Alloys," Proceedings of the Twentieth International Die-Casting Congress, pp. 273-283, 1999.
93. M. Maniruzzaman and M. Makhlof, "The Removal of Solid Inclusions from Aluminum Alloy Melts by Flotation - A Mathematical Model," Proceedings of the Fifth AFS International Congress on Molten Aluminum Processing, Orlando, FL, pp. 61-76, November 1998.
94. M. Maniruzzaman and M. Makhlof, "Modeling of the Flotation Process in Aluminum Melt Treatment," Proceedings of the Eighth International Conference on Modeling of Casting, Welding, and Advanced Solidification Processes, pp. 705-712, June 1998.
95. T. Davis and M. Makhlof, "Development of an Expert System for Locating Cooling Channels in Permanent Molds," Proceedings of the Eighth International Conference on Modeling of Casting, Welding, and Advanced Solidification Processes, pp. 991-999, June 1998.
96. M. Maniruzzaman and M. Makhlof, "Computer Simulation of Flotation Treatment Methods used in Aluminum Alloy Processing," Light Metals: Proceedings of the 127th TMS Annual Meeting, pp. 797-803, San Antonio, TX, February 1997.
97. L. Wang, D. Apelian, and M. Makhlof, "Tensile Properties of Aluminum Die Casting Alloys," Proceedings of the Nineteenth International Die-Casting Congress, pp. 179-189, November 1997.
98. M. Matthews and M. Makhlof, "An Investigation of Permanent Mold Heating and Cooling Methods to Optimize Cast Part Quality and Cycle Throughput," Proceedings of the Ninety-sixth TMS Congress, pp. 929-932, Feb. 1996.
99. Ahmed, T. Chadwick, M. Makhlof and D. Apelian, "Microstructure and Defects in Aluminum Alloy Castings: Numerical Prediction and Experimental Verification," Proceedings of the Seventh Conference on Modeling of Casting, Welding, and Advanced Solidification Processes, September 1995.
100. J. Laskowski and M. Makhlof, "Optimization of the Reduced Pressure Test for Measuring Hydrogen in Aluminum Alloy Melts," Proceedings of the Fourth International Conference On Molten Aluminum Processing, pp. 247-260, November 1995.

101. T. Chadwick and M. Makhlof, "The Effect of Chemistry, Grain Refiner, Modifier, and Cooling Rate on the Microstructure of 356 Alloy," Proceedings of the Fourth Int. Conference On Molten Aluminum Processing, pp. 295-314, November 1995.
102. M.M. Makhlof, R.K. Heinzmann, J.J. Bausch III and R.D. Sisson, Jr., "Intelligent Carburization Heat Treatment," Advanced Sensing, Modeling, and Control of Materials Processing, TMS International, edited by E.F. Matthys, pp. 223-229, 1992.
103. M.M. Makhlof, R.K. Heinzmann, J.J. Bausch III and R.D. Sisson, Jr., "Finite Difference Computer Models For Two Stage Vacuum and Gas Carburization Heat Treatments," Proceedings of The Thirteenth Heat Treating Conference, October 1991.
104. J.J. Bausch III, R.K. Heinzmann, M.M. Makhlof and R.D. Sisson, Jr., "A Model Based Control System for Carburization Heat Treatments", Proceedings of the Thirteenth Heat Treating Conference, October 1991.
105. M.M. Makhlof, E.Y. Lee, R.R. Biederman, and R.D. Sisson, Jr., "Experimental Verification of Finite Difference Models of Diffusion in Solids," Proceedings of the Tenth International Symposium on Finite Difference Modeling, pp. 295-315, July 1991.
106. M. Makhlof and R.D. Sisson, Jr., "Reducing Hydrogen Uptake by High Strength Steel Fasteners during Electroplating," *American Fastener Journal*, vol.8, No.2, March/April 1991.
107. M.M. Makhlof and R.D. Sisson, Jr., "Hydrogen Uptake during Cadmium Electroplating," Proceedings of the Fourth International Conference on Hydrogen Effects on Material Behavior, pp. 211-221, 1990.
108. M.M. Makhlof and R.D. Sisson, Jr., "Hydrogen Permeation through AISI 4340 Steel," Proceedings of the Third International Conference on Environmental Degradation of Engineering Materials, pp. 665-674, April 1987.
109. M.M. Makhlof and J. Cherng, "Design Guidelines for Phase Change Thermal Storage in Residential Solar Space Heating/Cooling Applications," Proceedings of the Second International Conference on Alternate Energy Sources, pp. 319-335, 1982.
110. Makhlof M. Makhlof and Diran Apelian, "Aluminum Metal Matrix Composite and Method of Making the Same," United States Provisional Patent, filed October 2009.

111. Makhlouf M. Makhlouf and Diran Apelian, "Aluminum Die Casting Alloy," European Patent, application filed April 2010.
112. Deepak Saha, Sumanth Shankar, Diran Apelian, and Makhlouf M. Makhlouf, "Casting of Aluminum-Based Wrought Alloys and Aluminum-Based Casting Alloys *via* Controlled Diffusion Solidification," United States Patent No. 7,201,210, April 2007.
113. G. Chedid, R.D. Sisson, Jr., and M.M. Makhlouf, "Real Time Sensor for Measuring Concentration Profiles in Carburized Steel," United States Patent No. 7,068,054 B2, June 2006.
114. M.M. Makhlouf and T.R. Schuster, "Composition and Method for Forming an Abrasive Article," United States Patent No. 4,652,277, 1987.
115. M.M. Makhlouf, "Solidification of the Aluminum-Silicon Eutectic," ASM Handbook, vol. 15, pp. 312 - 316, ASM, Intl., Metals Park, OH 44073, December 2008.
116. M.M. Makhlouf, "Melt Preparation for High Integrity Die Casting," Ch. 6 in High Integrity Die Casting: Sound, Reliable and Heat Treatable, J.L. Jorstad and D. Apelian eds., published by the North American Die Casting Association, Wheeling, IL Publication No. 404, 2008.
117. D. Apelian and M.M. Makhlouf, "High Integrity Aluminum Die Casting: Alloys Processes, and Melt Preparation," a book published by the North American Die-Casting Association, Wheeling, IL, April. 2004.
118. M. Makhlouf, L. Wang, and D. Apelian, "Microstructure and Properties of Aluminum Die-Casting Alloys," a book published by the North American Die-Casting Association, January 1999.
119. M. Maniruzzaman and M. Makhlouf, "Phase Separation Technologies in the Processing of Molten Aluminum," a monograph published by the American Foundry Society, Des Plaines, IL, January 1999.
120. L. Wang, D. Apelian, and M. Makhlouf, "Hydrogen in Aluminum Alloy Melts: Its Sources and Its Removal," a monograph published by the American Foundry Society, Des Plaines, IL, September 1998.
121. M.M. Makhlouf and R. D. Sisson, Jr., "Hydrogen Uptake During Cadmium Electroplating - Part I: Mathematical Modeling," Report prepared for The US Department of Army, US Army Materials Technology Laboratory, Watertown, MA, under contract No. DAAG46-K0009, February 1990.

122. M.M. Makhoulf and R. D. Sisson, Jr., "Hydrogen Uptake During Cadmium Electroplating - Part II: Electroplating Effects," Report prepared for The US Department of Army, US Army Materials Technology Laboratory, Watertown, MA, under contract No. DAAG46-K0009, February 1990.