

## REFERENCES

- Agarwal, R., Mohan, A., Mohan, S., & Gautam, R. K., "Synthesis and Characterization of Al/Al<sub>3</sub>Fe Nanocomposite for Tribological Applications," *Journal of Tribology, ASME*, **136**(2014) 012001-012009
- Aikin, R. M., "The Mechanical Properties of in-situ Composites," *JOM*, **49**(1997) 35-39
- Akbulut, H., Durman, M., & Yilmaz, F., "Dry Wear and Friction Properties of δ-Al<sub>2</sub>O<sub>3</sub> Short Fiber Reinforced AlSi (LM 13) Alloy Metal Matrix Composites," *Wear*, **215**(1998)170-179
- Alidokht, S.A., Abdollah-Zadeh, A., Soleymani, S., & Assadi, H., "Microstructure and Tribological Performance of an Aluminium Alloy Based Hybrid Composite Produced by Friction Stir Processing," *Materials & Design*, **32**(2011) 2727-2733
- Archard, J., "Contact and Rubbing of Flat Surfaces," *Journal of Applied Physics*, **24** (1953) 981-988
- Ashby, M. F., "Overview No. 80: On the Engineering Properties of Materials," *Acta Metallurgica*, **37**(1989) 1273-1293
- ASTM Standard G40-94, Standard Terminology Relating to Wear and Erosion, Annual Book of ASTM Standards, Vol.03.02, ASTM, Philadelphia, PA, 1994.
- ASTM Standard G99-05, Standard Test Method for Wear Testing with a Pin-on-Disk Aparatus.West Conshohocken, US: ASTM International, 2010.
- Badia, F. A., & Rohatgi, P. K., "Dispersion of Graphite Particles in Aluminium Castings Through Injection of the Melt," *Transactions. AFS*, **77** (1969) 402-406
- Baradeswaran, A., & Perumal, A. E., "Influence of B<sub>4</sub>C on the Tribological and Mechanical Properties of Al 7075-B<sub>4</sub>C Composites," *Composites Part B: Engineering*, **54**(2013)146-152
- Barnett, R.S., "Fretting and Fretting Corrosion," *Lubrication*, **41**(1955) 85-96
- Bartenev, G.M., & Lavrentev V.V. Friction and Wear of Polymers. Amsterdam, Elsevier, 1981.
- Batchelor, A. W., Stachowiak, G. W., & Cameron, A., "The Relationship Between Oxide Films and the Wear of Steels," *Wear*, **113**(1986) 203-223
- Bauri, R., Yadav, D., & Suhas, G., "Effect of Friction Stir Processing (FSP) on Microstructure and Properties of Al-TiC In Situ Composite," *Materials Science and Engineering: A*, **528**(2011) 4732-4739
- Bellman, R., & Levy, A., "Erosion Mechanism in Ductile Metals," *Wear*, **70**(1981)1-27
- Benjamin, J. S., & Volin, T. E. "The Mechanism of Mechanical Alloying," *Metallurgical Transactions*, **5**(1974)1929-1934
- Bhushan, B. Principles and Applications of Tribology, New York, Wiley, 1999.
- Bhushan, B., & Davis, R. E., "Surface Analysis Study of Electrical-Arc-Induced Wear," *Thin Solid Films*, **108**(1983)135-156
- Bhushan, B., Davis, R. E., & Gordon, M., "Metallurgical Re-Examination of Wear Modes I: Erosive, Electrical Arcing and Fretting', *Thin Solid Films*, **123**(1985a) 93-112
- Bhushan, B., Davis, R. E., & Kolar, H. R., "Metallurgical Re-Examination of Wear Modes II: Adhesive and Abrasive," *Thin Solid Films*, **123**(1985b) 113-126

Blau, P. J., ASM Handbook: Friction, Lubrication, and Wear Technology, Vol. 18. USA: ASM International Handbook Committee, 1992.

Booser, E. R.. CRC Handbook of Lubrication, Theory and Practice of Tribology: Volume II: Theory and Design. CRC Press, New York, 1984.

Bowden, F. P., & Tabor, D. The Friction and Lubrication of Solids, Oxford University Press, New York, 1950.

Bowden, F. P., & Tabor, D. The Friction and Lubrication of Solids, Vols I and II Oxford University Press, New York, 1964.

Braithwaite, E. R. (Ed.). Lubrication and Lubricants, Amsterdam, Elsevier, 1967.

Brydson, J. A. Plastic Materials, Chapter 27, 4th edn Butterworth Scientific, London, 1982.

Buchanan, G.R. Mechanics of Materials, HRW Inc, New York, 1988.

Buckley, D. H., Surface Effects in Adhesion, Friction, Wear, and Lubrication. Amsterdam, Elsevier, 1981.

Budinski, K.G. Engineering Materials: Properties and Selection, 2<sup>nd</sup> edn, Reston Publishing Company, Virginia, 1983.

Burwell, J. T., "Survey of Possible Wear Mechanisms," *Wear*, **1**(1957/58) 119-141

Bushan, B., & Gupta, B. K. Handbook of Tribology: Materials, Coatings, and Surface Treatments, McGraw-Hill, New York, 1991.

Carvill, J., Mechanical Engineer's Data Handbook, Butterworth-Heinemann, Burlington, USA, 1993.

Chaudhury, S. K., Singh, A. K., Sivaramakrishnan, C. S., & Panigrahi, S. C., "Wear and Friction Behaviour of Spray Formed and Stir Cast Al-2Mg-11TiO<sub>2</sub> Composites," *Wear*, **258**(2005) 759-767

Chawla, K. K., Ceramic Matrix Composites, Chapter 7, (pp. 212-251). Springer, New York, 1998.

Chawla, K. K., Composite Materials: Science and Engineering, Chapter 6, (pp.164-211) Springer, New York, 2012.

Chen, H., & Alpas, A. T., "Wear of Aluminium Matrix Composites Reinforced with Nickel-Coated Carbon Fibres," *Wear*, **192**(1996) 186-198

Chen, Z. Y., Chen, Y. Y., An, G. Y., Shu, Q., Li, D., & Liu, Y. Y., "Microstructure and Properties of In Situ Al/TiB<sub>2</sub> Composite Fabricated by In-Melt Reaction Method," *Metallurgical and Materials Transactions A*, **31**(2000a) 1959-1964

Chen, Z. Y., Chen, Y. Y., Shu, Q., An, G. Y., Li, D., Xu, D. S., & Liu, Y. Y., "Solidification and Interfacial Structure of In Situ Al-4.5 Cu/TiB<sub>2</sub> Composite," *Journal of Materials Science*, **35**(2000b) 5605-5608

Cheng, T., & Cantor, B., "Improvement of Ductility of NiAl at Room Temperature and Manufacturing of NiAl-TiB<sub>2</sub> Composites by Melt Spinning," *Materials Science and Engineering: A*, **153**(1992) 696-699

Christy, T. V., Murugan, N., & Kumar, S., "A comparative study on the microstructures and mechanical properties of Al 6061 alloy and the MMC Al 6061/TiB<sub>2</sub>/12<sub>p</sub>," *Journal of Minerals and Materials Characterization and Engineering*, **9**(2010) 57-65

Clauss, F.J., Solid Lubricants and Self-lubricating Solids, Academic Press, New York, 1972.

- Clyne, T.W., & Withers, P.J., (Eds.) "Proceedings of the 2nd European Conference on Advanced Materials and Processes," Euromat 91: University of Cambridge," Institute of Materials, London, 1991, pp. 459-468.
- Cöcen, Ü., & Önel, K., "Ductility and Strength of Extruded SiCp/Aluminium-Alloy Composites," *Composites Science and Technology*, **62**(2002) 275-282
- Davidson, A. M., & Regener, D., "A Comparison of Aluminium-Based Metal-Matrix Composites Reinforced with Coated and Uncoated Particulate Silicon Carbide," *Composites Science and Technology*, **60**(2000)865-869
- Davis, J. R. (Ed.). ASM Specialty Handbook: Cast Irons. ASM international, 1996.
- Davis, J. R., (Ed.). ASM Specialty Handbook: Heat-resistant Materials. ASM International, 1997.
- Davis, J. R., (Ed.). ASM Specialty Handbook: Tool Materials. ASM International, 1995.
- Davis, J. R., ASM Specialty Handbook: Stainless Steels. ASM International, 1994.
- Demirel, M., & Muratoglu, M., "Influence of Load and Temperature on the Dry Sliding Wear Behaviour of Aluminium-Ni<sub>3</sub>Al Composites," *Indian Journal of Engineering & Materials Sciences*, **18**(2011) 268-282
- Deuis, R. L., Subramanian, C., & Yellup, J. M., "Abrasive Wear of Aluminium Composites-A Review," *Wear*, **201**(1996)132-144
- Deuis, R. L., Subramanian, C., & Yellup, J. M., "Dry Sliding Wear of Aluminium Composites-A Review," *Composites Science and Technology*, **57**(1997)415-435
- Dinaharan, I., & Murugan, N., "Dry Sliding Wear Behaviour of AA6061/ZB<sub>2</sub> In-Situ Composite," *Transactions of Nonferrous Metals Society of China*, **22**(2012) 810-818
- Dinaharan, I., Murugan, N., & Parameswaran, S., "Influence of In Situ Formed ZrB<sub>2</sub> Particles on Microstructure and Mechanical Properties of AA6061 Metal Matrix Composites," *Materials Science and Engineering: A*, **528**(2011)5733-5740
- Dowson, D., History of Tribology, Addison-Wesley Longman Limited, 1979.
- Duralcan Aluminium Metal Matrix Composites, Duralcan,1999.
- Eyre, T.S., & Scott, D., (Ed.), Treatise on Materials Science and Technology, Vol. 13, Academic Press, New York,1979, pp. 363-442.
- Fan, T., Yang, G., & Zhang, D., "Thermodynamic Effect of Alloying Addition on In-Situ Reinforced TiB<sub>2</sub>/Al Composites," *Metallurgical and Materials Transactions A*, **36**(2005) 225-233
- Fines, R. E., & Bartolomucci, J., Engineered Materials Handbook, Vol. 2: Engineering Plastics. ASM International, Metals Park, OH, 1988, 156-158.
- Finnie, I., "Erosion of Surfaces by Solid Particles," *Wear*, **3**(1960) 87-103
- Glaeser, W., Materials for Tribology, Amsterdam, Elsevier, 1992.
- Gorsse, S., & Miracle, D. B., "Mechanical Properties of Ti-6Al-4V/TiB Composites with Randomly Oriented and Aligned TiB Reinforcements," *Acta Materialia*, **51**(2003) 2427-2442
- Guile, A. E., & Jüttner, B., "Basic Erosion Processes of Oxidized and Clean Metal Cathodes by Electric Arcs", *Plasma Science, IEEE Transactions on Plasma Science*, **8**(1980) 259-269
- Gupta, M., & Srivatsan, T. S., "Interrelationship Between Matrix Microhardness and Ultimate Tensile Strength of Discontinuous Particulate-Reinforced Aluminium Alloy Composites," *Materials Letters*, **51**(2001) 255-261

- Haher R. A. & Smith, P. A., "Overview of Traditional Ceramics," In: Ceramics and Glasses, Vol. 4, Engineered Materials Handbook. ASM International, Metals Park , Ohio, 1991, pp. 3–15.
- Hamid, A. A., Ghosh, P. K., Jain, S. C., & Ray, S., "Influence of Particle Content and Porosity on the Wear Behaviour of Cast In Situ Al (Mn)-Al<sub>2</sub>O<sub>3</sub> (MnO<sub>2</sub>) Composite," *Wear*, **260**(2006)368-378
- Hammitt, F. G., Cavitation and Liquid Impact Erosion. ASME Wear Control Handbook, American Society of Mechanical Engineers, 161, 1980.
- Han, G., Zhang, W., Zhang, G., Feng, Z., & Wang, Y., "High-Temperature Mechanical Properties and Fracture Mechanisms of Al-Si Piston Alloy Reinforced with In Situ TiB<sub>2</sub> Particles," *Materials Science and Engineering: A*, **633**(2015)161-168
- Han, Y., Liu, X., & Bian, X., "In Situ TiB<sub>2</sub> Particulate Reinforced Near Eutectic Al-Si Alloy Composites," *Composites Part A: Applied Science and Manufacturing*, **33**(2002) 439-444
- Handbook, A. S. M., Vol. 1: Properties and Selection: Irons, Steels, and High Performance Alloys. Materials Park, Ohio: ASM International, 1990a.
- Handbook, A. S. M., Vol. 2: Properties and Selection: Nonferrous Alloys and Special-Purpose Materials. Materials Park, Ohio: ASM International, 1990b.
- Harper C. A., Handbook of Plastics and Elastomers, New York, NY, McGraw-Hill, 1975.
- Harrigan Jr, W. C., Everett, R. K., & Arsenault, R. J., Metal matrix composites. Metal Matrix Composites: *Processing and Interfaces*, (1991)1-16
- Hashim, J., Looney, L., & Hashmi, M. S. J., "Metal Matrix Composites: Production by the Stir Casting Method," *Journal of Materials Processing Technology*, **92**(1999)1-7
- Hassan, A. M., Alrashdan, A., Hayajneh, M. T., & Mayyas, A. T., "Wear Behaviour of Al-Mg-Cu-Based Composites Containing SiC Particles," *Tribology International*, **42**(2009)1230-1238
- Hausner, H. H., Friction and Antifriction Materials (Vol. 4). Plenum Publishing Corporation, 1970.
- Heilmann, P., Don, J., Sun, T. C., Rigney, D. A., & Glaeser, W. A., "Sliding Wear and Transfer," *Wear*, **91**(1983)171-190
- Hokkirigawa, K., & Kato, K., "An Experimental and Theoretical Investigation of Ploughing, Cutting and Wedge Formation During Abrasive Wear," *Tribology International*, **21**(1988)51-57
- Hollomon, J. H., Tensile Deformation, *AIME Trans*, **12**(1945)1-22
- Hoseini, M., & Meratian, M., "Tensile Properties of In-Situ Aluminium-Alumina Composites," *Materials Letters*, **59**(2005) 3414-3418
- Hosking, F. M., Portillo, F. F., Wunderlin, R., & Mehrabian, R., "Composites of Aluminium Alloys: Fabrication and Wear Behaviour," *Journal of Materials Science*, **17**(1982) 477-498
- Hosseini, N., Karimzadeh, F., Abbasi, M. H., & Enayati, M. H., "A Comparative Study on the Wear Properties of Coarse-Grained Al6061 Alloy and Nanostructured Al6061-Al<sub>2</sub>O<sub>3</sub> Composites," *Tribology International*, **54**(2012) 58-67
- Hurricks, P. L., "The Mechanism of Fretting-A Review," *Wear*, **15**(1970) 389-409
- Ibrahim, I. A., Mohamed, F. A., & Lavernia, E. J., "Particulate Reinforced Metal Matrix Composites - A Review," *Journal of Materials Science*, **26**(1991)1137-1156

- Jerome, S., Ravisankar, B., Mahato, P. K., & Natarajan, S., "Synthesis and Evaluation of Mechanical and High Temperature Tribological Properties of In-Situ Al-TiC Composites," *Tribology International*, **43**(2010) 2029-2036
- Jha, A., & Dometakis, C., "The Dispersion Mechanism of TiB<sub>2</sub> Ceramic Phase in Molten Aluminium and its Alloys," *Materials & Design*, **18**(1997)297-301
- Jiang, J., Stott, F. H., & Stack, M. M., "A Mathematical Model for Sliding Wear of Metals at Elevated Temperatures," *Wear*, **181**(1995)20-31
- Kayaba, T., & Kato, K., "The Adhesive Transfer of the Slip-Tongue and the Wedge," *ASLE Transactions*, **24**(1981)164-174
- Khorramie, S. A., Baghchesara, M. A., & Gohari, D. P., "Fabrication of Aluminum Matrix Composites Reinforced with Al<sub>2</sub>ZrO<sub>5</sub> Nano Particulates Synthesized by Sol-Gel Auto-Combustion Method," *Transactions of Nonferrous Metals Society of China*, **23**(2013)1556-1562
- Kragelsky, I. V., Dobychin, M. N., & Kombalov, V. S., Friction and Wear: Calculation Methods, Elsevier, 2013.
- Kumar, B. A., & Murugan, N., "Metallurgical and Mechanical Characterization of Stir Cast AA6061-T<sub>6</sub>-AlN<sub>p</sub> Composite," *Materials & Design*, **40**(2012)52-58
- Kumar, B. A., Murugan, N., & Dinaharan, I., "Dry Sliding Wear Behavior of Stir Cast AA6061-T<sub>6</sub>/AlN<sub>p</sub> Composite," *Transactions of Nonferrous Metals Society of China*, **24**(2014)2785-2795
- Kumar, G. N., Narayanasamy, R., Natarajan, S., Babu, S. K., Sivaprasad, K., & Sivasankaran, S., "Dry Sliding Wear Behaviour of AA 6351-ZrB<sub>2</sub> In Situ Composite at Room Temperature," *Materials & Design*, **31**(2010)1526-1532
- Kumar, N., Gautam, G., Gautam, R. K., Mohan, A., & Mohan, S., "Synthesis and Characterization of TiB<sub>2</sub> Reinforced Aluminium Matrix Composites: A Review," *Journal of The Institution of Engineers (India): Series D*,(2015a)1-21. DOI 10.1007/s40033-015-0091-7
- Kumar, N., Gautam, G., Gautam, R. K., Mohan, A., & Mohan, S., "High Temperature Tribology Of AA5052/ZrB<sub>2</sub> PAMcs," *Journal of Tribology, ASME*. (2016b), DOI: 10.1115/1.4033097.
- Kumar, N., Gautam, G., Gautam, R. K., Mohan, A., & Mohan, S., "Wear, Friction and Profilometer Studies of Insitu AA5052/ZrB<sub>2</sub> Composites," *Tribology International*, **97**(2016a) 313-326
- Kumar, N., Gautam, R. K., & Mohan, S., "In-Situ Development of ZrB<sub>2</sub> Particles and their Effect on Microstructure and Mechanical Properties of AA5052 Metal-Matrix Composites," *Materials & Design*, **80**(2015b)129-136
- Kumar, N., Gautam, R. K., & Mohan, S., "Wear and Friction Behaviour of In-Situ AA5052/ZrB<sub>2</sub> Composites Under Dry Sliding Conditions," *Tribology in Industry*, **37**(2015c) 244-256
- Kumar, S., Chakraborty, M., Sarma, V. S., & Murty, B. S., "Tensile and Wear Behaviour of In Situ Al-7Si/TiB<sub>2</sub> Particulate Composites," *Wear*, **265**(2008a) 134-142
- Kumar, S., Rao, G. S., Chattopadhyay, K., Mahobia, G. S., Srinivas, N. S., & Singh, V., "Effect of Surface Nanostructure on Tensile Behavior of Superalloy IN718," *Materials & Design*, **62**(2014) 76-82
- Kumar, S., Sarma, V. S., & Murty, B. S., "Influence of In Situ Formed TiB<sub>2</sub> Particles on the Abrasive Wear Behaviour of Al-4Cu Alloy," *Materials Science and Engineering: A*, **465**(2007)160-164

- Kumar, S., Sarma, V. S., & Murty, B. S., "A Statistical Analysis on Erosion Wear Behaviour of A356 Alloy Reinforced with In Situ Formed TiB<sub>2</sub> Particles," *Materials Science and Engineering: A*, **476**(2008b) 333-340
- Kumar, S., Sarma, V. S., & Murty, B. S., "Effect of Temperature on the Wear Behaviour of Al-7Si-TiB<sub>2</sub> In-Situ Composites," *Metallurgical and Materials Transactions A*, **40**(2009)223-231
- Kumar, S., Sarma, V. S., & Murty, B. S., "High Temperature Wear Behaviour of Al-4Cu-TiB<sub>2</sub> In Situ Composites," *Wear*, **268**(2010b) 1266-1274
- Lakshmi, S., Lu, L., & Gupta, M., "In Situ Preparation of TiB<sub>2</sub> Reinforced Al Based Composites," *Journal of Materials Processing Technology*, **73**(1998)160-166
- Lee, K. B., Sim, H. S., Heo, S. W., Yoo, H. R., Cho, S. Y., & Kwon, H., "Tensile Properties and Microstructures of Al Composite Reinforced with BN Particles," *Composites Part A: Applied Science and Manufacturing*, **33**(2002) 709-715
- Liang, Y. F., Zhou, J. E., & Dong, S. Q., "Microstructure and Tensile Properties of In Situ TiCp/Al-4.5 Wt.% Cu Composites Obtained by Direct Reaction Synthesis," *Materials Science and Engineering: A*, **527**(2010)7955-7960
- Lindroos, V. K., & Talvitie, M. J., "Recent Advances in Metal Matrix Composites," *Journal of Materials Processing Technology*, **53**(1995) 273-284
- Lipson, C., Wear Considerations in Design, Prentice-Hall, Eaglewood Cliffs, New Jersey, 1967.
- Lloyd, D. J., "Particle Reinforced Aluminium and Magnesium Matrix Composites," *International Materials Reviews*, **39**(1994)1-23
- Lohar, A. K., Mondal, B. N., & Panigrahi, S. C., "Effect of Mg on the Microstructure and Mechanical Properties of Al0.3Sc0.15Zr-TiB<sub>2</sub> Composite," *Journal of Materials Engineering and Performance*, **20**(2011)1575-1582
- Lu, L., Lai, M. O., & Chen, F. L., "Al-4 wt.% Cu Composite Reinforced with In-Situ TiB<sub>2</sub> Particles," *Acta Materialia*, **45**(1997), 4297- 4309
- Lu, L., Lai, M. O., Su, Y., Teo, H. L., & Feng, C. F., "In Situ TiB<sub>2</sub> Reinforced Al Alloy Composites," *Scripta Materialia*, **45**(2001)1017-1023
- Ludema, K. C., Friction: A Study in the Prevention of Seizure. *ASTM Standards News*, **15**(1987) 54-58
- Lundberg G., and Palmgren, A., "Dynamic Capacity of Rolling Bearings," *Acta Polytechnica-Mech. Eng. Series I*, **1** (1947) 4-51
- Luo, A., "Processing, Microstructure, and Mechanical Behaviour of Cast Magnesium Metal Matrix Composites," *Metallurgical and Materials Transactions A*, **26**(1995a) 2445-2455
- Luo, A., Renaud, J., Nakatsugawa, I., & Plourde, J., "Magnesium Castings for Automotive Applications," *JOM*, **47**(1995b) 28-31
- Lynch, J. F., Engineering Property Data on Selected Ceramics. Defense Technical Information Center, Ohio,1981.
- Ma, K., Wen, H., Hu, T., Topping, T. D., Isheim, D., Seidman, D. N., & Schoenung, J. M., "Mechanical Behaviour and Strengthening Mechanisms in Ultrafine Grain Precipitation-Strengthened Aluminium Alloy," *Acta Materialia*, **62**(2014)141-155
- Mack, J., Advanced Polymer Composite, *Materials Edge*, **18**(1988)17-27
- Magee, J.H., "Wear of Stainless Steels," In: Henry, S.D. (Ed.), ASM handbook, Vol.18: Friction, Lubrication and Wear Technology. ASM International, Metals Park, Ohio, 1992, pp.710.

- Maloney III, J.L., "Friction and Wear of Tool Steels," In: Henry, S.D. (Ed.), ASM Handbook, Vol.18: Friction, Lubrication and Wear Technology. ASM International, Metals Park, Ohio, 1992, pp.734.
- Mandal, A., Chakraborty, M., & Murty, B. S., "Effect of TiB<sub>2</sub> Particles on Sliding Wear Behaviour of Al-4Cu Alloy," *Wear*, **262**(2007)160-166
- Mandal, A., Maiti, R., Chakraborty, M., & Murty, B. S., "Effect of TiB<sub>2</sub> Particles on Aging Response of Al-4Cu Alloy," *Materials Science and Engineering: A*, **386**(2004) 296-300
- Mandal, A., Murty, B. S., & Chakraborty, M., "Sliding Wear Behaviour of T<sub>6</sub> Treated A356-TiB<sub>2</sub> In-Situ Composites," *Wear*, **266**(2009a) 865-872
- Mandal, A., Murty, B. S., & Chakraborty, M., "Wear Behaviour of Near Eutectic Al-Si Alloy Reinforced with In-Situ TiB<sub>2</sub> Particles," *Materials Science and Engineering: A*, **506**(2009b) 27-33
- Mandal, D., Dutta, B. K., & Panigrahi, S. C., "Microstructure and Mechanical Properties of Al-2Mg Alloy Base Short Steel Fiber Reinforced Composites Prepared by Vortex Method," *Journal of Materials Science*, **41**(2006) 4764-4770
- Mandal, D., Dutta, B. K., & Panigrahi, S. C., "Effect of wt% Reinforcement on Microstructure and Mechanical Properties of Al-2Mg Base Short Steel Fiber Composites," *Journal of Materials Processing Technology*, **198**(2008)195-201
- Matthews, F. L., & Rawlings, R. D. Composite Materials: Engineering and Science. Elsevier, 1999.
- Mehrabian, R., Riek, R. G., & Flemings, M., "Preparation and Casting of Metal-Particulate Non-Metal Composites," *Metallurgical Transactions*, **5**(1974)1899-1905
- Min, S. O. N. G., "Effects of Volume Fraction of SiC Particles on Mechanical Properties of SiC/Al Composites," *Transactions of Nonferrous Metals Society of China*, **19**(2009)1400-1404
- Mohan, S., Gautam, R.K., & Mohan, A., "Tribology and Aluminium Matrix Composites," In: R. Tyagi (Ed.), Processing Techniques and Tribological Behaviour of Composite Materials," IGI Global. USA, 2015, pp.126-148.
- Mohan, S., & Mohan, A., "Wear, Friction and Prevention of Tribo-Surfaces by Coatings/Nanocoatings," In: M. Aliofkhazraei (Ed.), Anti-abrasive Nanocoatings: Current and Future Applications, Elsevier, 2015. pp. 3-22.
- Mortensen, A., Cornie, J. A., & Flemings, M. C., "Solidification Processing of Metal-Matrix Composites," *JOM*, **40**(1988)12-19
- Moyer, C.A., "Friction and Wear of Bearing Steels," In: Henry, S.D., (Ed.), ASM Handbook, Vol. 18: Friction, Lubrication and Wear Technology. ASM International, Metals Park, Ohio, 1992, pp.725.
- Nami, H., Adgi, H., Sharifitabar, M., & Shamabadi, H., "Microstructure and Mechanical Properties of Friction Stir Welded Al/Mg<sub>2</sub>Si Metal Matrix Cast Composite," *Materials & Design*, **32**(2011) 976-983
- Natarajan, S., Narayanasamy, R., Babu, S. K., Dinesh, G., Kumar, B. A., & Sivaprasad, K., "Sliding Wear Behaviour of Al 6063/TiB<sub>2</sub> In Situ Composites at Elevated Temperatures," *Materials & Design*, **30**(2009)2521-2531
- Niranjan, K., & Lakshminarayanan, P. R., "Dry Sliding Wear Behaviour of In Situ Al-TiB<sub>2</sub> Composites," *Materials & Design*, **47**(2013) 167-173
- Niskanen, P., & Mohn, W. R., "Versatile Metal-matrix composites," *Advanced Materials and Process*, United States, 133, 1988.

Oleesky, S.S. and Mohr, J.G., Handbook of Reinforced Plastics, Reinhold, New York. 1964.

Pathak, J. P., & Mohan, S., "Abrasive Wear Characteristics of Cast Aluminium Silicon Alloys Sliding Against Corundum Disc," *Indian Foundry Journal*, **44**(1998) TP5-TP10

Peterson, M. B. "Wear Testing Objectives and Approaches." In Selection and Use of Wear Tests for Metals. ASTM International, 1976.

Prasad, D. S., Shoba, C., & Ramanaiah, N., "Investigations on Mechanical Properties of Aluminum Hybrid Composites," *Journal of Materials Research and Technology*, **3**(2014) 79-85

Quinn, T. F. J., "The Effect of "Hot-Spot" Temperatures on the Unlubricated Wear of Steel," *ASLE Transactions*, **10**(1967)158-168

Quinn, T. F. J., "Review of Oxidational Wear: Part I: The Origins of Oxidational Wear," *Tribology International*, **16**(1983a) 257-271

Quinn, T. F. J., "Review of Oxidational Wear Part II: Recent Developments and Future Trends in Oxidational Wear Research," *Tribology International*, **16**(1983b)305-315

Rabinowicz, E., Friction and Wear of Materials,1965.

Radhika, N., & Raghu, R., "Evaluation of Dry Sliding Wear Characteristics of LM13Al/B<sub>4</sub>C Composites," *Tribology in Industry*, **37**(2015)20-28

Rajan, H. M., Ramabalan, S., Dinaharan, I., & Vijay, S. J., "Synthesis and Characterization of In Situ Formed Titanium Diboride Particulate Reinforced AA7075 Aluminum Alloy Cast Composites," *Materials & Design*, **44**(2013)438-445

Rajan, H. M., Ramabalan, S., Dinaharan, I., & Vijay, S. J., "Effect of TiB<sub>2</sub> Content and Temperature on Sliding Wear Behavior of AA7075/TiB<sub>2</sub> In Situ Aluminum Cast Composites," *Archives of Civil and Mechanical Engineering*, **14**(2014)72-79

Ramesh, C. S., & Ahamed, A., "Friction and Wear Behaviour of Cast Al 6063 Based In Situ Metal Matrix Composites," *Wear*, **271**(2011)1928-1939

Ramesh, C. S., Ahamed, A., Channabasappa, B. H., & Keshavamurthy, R., "Development of Al 6063-TiB<sub>2</sub> In Situ Composites," *Materials & Design*, **31**(2010) 2230-2236.

Ramesh, C. S., Pramod, S., & Keshavamurthy, R., "A Study on Microstructure and Mechanical Properties of Al 6061-TiB<sub>2</sub> In-Situ Composites," *Materials Science and Engineering: A*, **528**(2011)4125-4132

Rana, F., & Stefanescu, D. M., "Friction Properties of Al-1.5Pct Mg/SiC Particulate Metal-Matrix Composites," *Metallurgical Transactions A-Physical Metallurgy and Materials Science*, **20**(1989)1564-1566

Rao, R. N., & Das, S., "Effect of Applied Pressure on the Tribological Behaviour of SiCp Reinforced AA2024 Alloy," *Tribology International*, **44**(2011)454-462

Rao, R. N., & Das, S., "Effect of SiC Content and Sliding Speed on the Wear Behaviour of Aluminium Matrix Composites," *Materials & Design*, **32**(2011)1066-1071

Ray, S., M. Tech. Dissertation, Indian Institute of Technology, Kanpur, India, 1969.

Rigney, D. A., Paper X (i) "The Role of Characterization in Understanding Debris Generation", *Tribology Series*, **21**(1992), 405-412

Rohatgi, P., "Cast Aluminum-Matrix Composites for Automotive Applications," *JOM*, **43**(1991)10-15

Rohatgi, P., & Asthana, R., "Solidification Science in Cast MMCs: The Influence of Merton Flemings," *JOM*, **53**(2001) 9-13

- Ruff, A. W., Ives, L. K., & Glaeser, W., "Characterization of Wear Surfaces and Wear Debris," American Society for Metals, 1981, 235-289.
- Sahin, Y., "Preparation and Some Properties of SiC Particle Reinforced Aluminium Alloy Composites," *Materials & Design*, **24**(2003) 671- 679
- Sahoo, P., & Koczak, M. J., "Microstructure-Property Relationships of In Situ Reacted TiC/Al-4.5wt.% Cu Metal Matrix Composites," *Materials Science and Engineering: A*, **131**(1991)69-76
- Sarkar, A. D. Wear of Metals: International Series in Materials Science and Technology, Vol. 18, Elsevier, 2013.
- Schoutens, J. E., "Introduction to Metal-Matrix Composite Materials", DOD Metal Matrix Composites Information Analysis Centre, Tutorial Series, No. 272 (Edited by P. O. Drawer, Q.Q.), Santa Barbara, CA, 1982.
- Schwartz, M. M., Composite Materials Handbook. McGraw-Hill, New York, 1984.
- Scott, D., "Debris Examination-A Prognostic Approach to Failure Prevention," *Wear*, **34**(1975)15-22
- Scott, D., & Westcott, V. C., "Predictive Maintenance by Ferrography," *Wear*, **44**(1977)173-182
- Shabel, B. S., Granger, D. A., & Truckner, W. G., "Friction and Wear of Aluminum-Silicon Alloys," ASM Handbook, Vol.18, 1992, pp. 785-794.
- Sharifitabar, M., Sarani, A., Khorshahian, S., & Afarani, M. S., "Fabrication of 5052Al/Al<sub>2</sub>O<sub>3</sub> Nanoceramic Particle Reinforced Composite via Friction Stir Processing Route," *Materials & Design*, **32**((2011) 4164-4172
- Shercliff, H. R., & Ashby, M. F., "Design with Metal Matrix Composites,' *Materials Science and Technology*, **10**(1994)443-451
- Shyu, R. F., & Ho, C. T., "In Situ Reacted Titanium Carbide-Reinforced Aluminum Alloys Composite," *Journal of Materials Processing Technology*, **171**(2006)411-416
- Singh, J., & Alpas, A. T., "Elevated Temperature Wear of Al6061 and Al6061-20% Al<sub>2</sub>O<sub>3</sub>," *Scripta Metallurgica et Materialia*, **32**(1995)1099-1105
- Sivaprasad, K., Babu, S. K., Natarajan, S., Narayanasamy, R., Kumar, B. A., & Dinesh, G., "Study on Abrasive and Erosive Wear Behaviour of Al 6063/TiB<sub>2</sub> In Situ Composites," *Materials Science and Engineering: A*, **498**(2008)495-500
- Smagorinski, M. E., Tsantrizos, P. G., Grenier, S., Cavasin, A., Brzezinski, T., & Kim, G., "The Properties and Microstructure of Al-Based Composites Reinforced with Ceramic Particles," *Materials Science and Engineering: A*, **244**(1998) 86-90
- Söderberg, S., Hogmark, S., & Swahn, H., "Mechanisms of Material Removal During Erosion of A Stainless Steel," *ASLE Transactions*, **26**(1983)161-172
- Srivastava, S. "Preparation and Characterization of Al-Fe Composites," Ph.D. Thesis, Department of Metallurgical Engineering. Indian Institute of Technology (Banaras Hindu University), Varanasi, India, 2006.
- Stott, F. H., Breakell, J. E., & Newman, R. C., "The Corrosive Wear of Cast Iron Under Potentiostatically-Controlled Conditions in Sulphuric Acid Solutions," *Corrosion Science*, **30**(1990) 813-830
- Suh, N. P., "The Delamination Theory of Wear," *Wear*, **25**(1973)111-124
- Suh, N. P., "An Overview of the Delamination Theory of Wear," *Wear*, **44**(1977)1-16
- Suh, N. P., & Sin, H. C., "The Genesis of Friction," *Wear*, **69**(1981)91-114

- Surappa, M. K., "Microstructure Evolution During Solidification Of DRMMCs (Discontinuously Reinforced Metal Matrix Composites): State of Art," *Journal of Materials Processing Technology*, **63**(1997) 325-333
- Surappa, M. K., Aluminium Matrix Composites: Challenges and Opportunities, *Sadhana*, **28**(2003) 319-334
- Tao, F.F., Transactions of American Society of Lubrication Engineers, **12**(1969) 95-105
- Taya, M., & Arsenault, R. J., Metal Matrix Composites: Thermomechanical Behavior. Elsevier, 1989.
- Tee, K. L., Lu, L., & Lai, M. O., "Synthesis of In Situ Al-TiB<sub>2</sub> Composites Using Stir Cast Route," *Composite Structures*, **47**(1999b) 589-593
- Tee, K., Lu, L., & Lai, M. O., "In Situ Processing of Al-TiB<sub>2</sub> Composite by the Stir-Casting Technique," *Journal of Materials Processing Technology*, **89**(1999a) 513-519
- Terry, B., & Jones, G., Metal Matrix Composites: Current Developments and Future Trends in Industrial Research and Applications," Elsevier Advanced Technology, Mayfield House, 256 Banbury Rd, Oxford OX 2 7 DH, UK, 1990. 154, 1990.
- Thangaraju, S., Heilmair, M., Murty, B. S., & Vadlamani, S. S., "On the Estimation of True Hall-Petch Constants and Their Role on the Superposition Law Exponent in Al Alloys," *Advanced Engineering Materials*, **14**(2012) 892-897
- Theling, K.E., Steel and Its Heat treatment: Bofors Handbook, Butterworth, London. 1984.
- Tian, K., Zhao, Y., Jiao, L., Zhang, S., Zhang, Z., & Wu, X., "Effects of In Situ Generated ZrB<sub>2</sub> Nano-Particles on Microstructure and Tensile Properties of 2024Al Matrix Composites," *Journal of Alloys and Compounds*, **594**(2014), 1-6
- Tjong, S. C., & Ma, Z. Y., "Microstructural and Mechanical Characteristics of In Situ Metal Matrix Composites," *Materials Science and Engineering: R: Reports*, **29**(2000) 49-113
- Tjong, S. C., & Tam, K. F., "Mechanical and Thermal Expansion Behavior of Hipped Aluminum-TiB<sub>2</sub> Composites," *Materials Chemistry and Physics*, **97**(2006)91-97
- Tjong, S. C., & Wang, G. S., "High Cycle Fatigue Response of In-Situ Al-Based Composites Containing TiB<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> Submicron Particles," *Composites Science and Technology*, **65**(2005)1537-1546
- Tong, X. C., & Ghosh, A. K., "Fabrication of In Situ TiC Reinforced Aluminum Matrix Composites," *Journal of Materials Science*, **36**(2001)4059-4069
- Tu, J. P., Meng, L., & Liu, M. S., "Friction and Wear Behavior of Cu-Fe<sub>3</sub>Al Powder Metallurgical Composites in Dry Sliding," *Wear*, **220**(1998)72-79
- Tyagi, R., "Synthesis and Tribological Characterization of In Situ Cast Al-TiC Composites," *Wear*, **259**(2005) 569-576
- Usurelu, E. M., Moldovan, P., Butu, M., Ciucă, I., & Dragut, V., "On the Mechanism and Thermodynamics of the Precipitation of TiB<sub>2</sub> Particles in 6063 Matrix Aluminum Alloy," *UPB Scientific Bulletin B*, **73**(2011) 205-216
- Vencl, A., Rac, A., & Bobic, I., "Tribological Behaviour of Al-Based MMCs and Their Application in Automotive Industry," *Tribology in Industry*, **26**(2004) 31-38
- Verhoeven, J. D., Fundamentals of Physical Metallurgy, New York: Wiley. 1975.
- Vingsbo, O., & Hogmark, S., Wear of steels. American Society for Metals, 1981, 373-408.

- Wang, H., Li, G., Zhao, Y., & Chen, G., "In Situ Fabrication and Microstructure of  $\text{Al}_2\text{O}_3$  Particles Reinforced Aluminum Matrix Composites," *Materials Science and Engineering: A*, **527**(2010) 2881-2885
- Waterhouse, R.B., "Fretting Wear," In: ASM Handbook, Vol.18: Friction, Lubrication and Wear Technology, ASM International, Metals Park, Ohio, 1992, pp. 242-256.
- Williamson, G. K., & Hall, W. H., "X-Ray Line Broadening from Filed Aluminium and Wolfram," *Acta Metallurgica*, **1**(1953) 22-31
- Winer, W. O., & Peterson, M. B. (Eds.), Wear Control Handbook. American Society of Mechanical Engineers, 1980.
- Wood, J. V., Davies, P., & Kellie, J. L. F., "Properties of Reactively Cast Aluminium-TiB<sub>2</sub> Alloys," *Materials Science and Technology*, **9**(1993) 833-840
- Xue, J., Wang, J., Han, Y., Li, P., & Sun, B., "Effects of CeO<sub>2</sub> Additive on the Microstructure and Mechanical Properties of In Situ TiB<sub>2</sub>/Al Composite," *Journal of Alloys and Compounds*, **509**(2011)1573-1578
- Yang, W. W., Guo, Z. M., Guo, L. C., Cao, H. Q., Luo, J., & Ye, A. P., "In Situ Fabrication and Properties of AlN Dispersion Strengthened 2024 Aluminum Alloy," *International Journal of Minerals, Metallurgy, and Materials*, **21**(2014)1228-1232
- Yi, H., Ma, N., Li, X., Zhang, Y., & Wang, H., "High-Temperature Mechanics Properties of In Situ TiB<sub>2</sub>p Reinforced Al-Si Alloy Composites," *Materials Science and Engineering: A*, **419**(2006a)12-17
- Yi, H., Ma, N., Zhang, Y., Li, X., & Wang, H., "Effective Elastic Moduli of Al-Si Composites Reinforced In Situ with TiB<sub>2</sub> Particles," *Scripta Materialia*, **54**(2006b) 1093-1097
- Yoo, S. J., Han, S. H., & Kim, W. J., "Strength and Strain Hardening of Aluminum Matrix Composites with Randomly Dispersed Nanometer-Length Fragmented Carbon Nanotubes," *Scripta Materialia*, **68**(2013) 711-714
- Zhang, S., Zhao, Y., Chen, G., & Cheng, X. "Microstructures and Dry Sliding Wear Properties of In Situ (Al<sub>3</sub>Zr+ZrB<sub>2</sub>)/Al Composites," *Journal of Materials Processing Technology*, **184**(2007)201-208
- Zhang, X., Luo, X., Li, J., Han, J., Han, W., & Hong, C., "Structure and Bonding Features of ZrB<sub>2</sub> (0001) Surface," *Computational Materials Science*, **46**(2009)1-6
- Zhang, X., Xu, L., Du, S., Han, J., Hu, P., & Han, W., "Fabrication and Mechanical Properties of ZrB<sub>2</sub>-SiC<sub>w</sub> Ceramic Matrix Composite," *Materials Letters*, **62**(2008) 1058-1060
- Zhang, Y., Ma, N., & Wang, H., "Effect of Particulate/Al Interface on the Damping Behavior of In Situ TiB<sub>2</sub> Reinforced Aluminium Composite," *Materials Letters*, **61**(2007)3273-3275
- Zhang, Z., & Chen, D. L., "Contribution of Orowan Strengthening Effect in Particulate-Reinforced Metal Matrix Nanocomposites," *Materials Science and Engineering: A*, **483**(2008)148-152
- Zhao, D. G., Liu, X. F., Pan, Y. C., Bian, X. F., & Liu, X. J., "Microstructure and Mechanical Properties of In Situ Synthesized (TiB<sub>2</sub>+Al<sub>2</sub>O<sub>3</sub>)/Al-Cu Composites," *Journal of Materials Processing Technology*, **189**(2007)237-241
- Zhao, D. G., Liu, X. F., Pan, Y. C., Liu, Y. X., & Bian, X. F., "Microstructure And Mechanical Behavior of AlSiCuMgNi Piston Alloys Reinforced with TiB<sub>2</sub> Particles," *Journal of Materials Science*, **41**(2006)4227-4232

- Zhao, Y. H., Liao, X. Z., Jin, Z., Valiev, R. Z., & Zhu, Y. T., "Microstructures and Mechanical Properties of Ultrafine Grained 7075 Al Alloy Processed by ECAP and Their Evolutions During Annealing," *Acta Materialia*, **52**(2004) 4589-4599
- Zhao, Y. T., Zhang, S. L., Chen, G., Cheng, X. N., & Wang, C. Q., "In Situ ( $\text{Al}_2\text{O}_3+\text{Al}_3\text{Zr}$ )np/Al Nanocomposites Synthesized by Magneto-Chemical Melt Reaction," *Composites Science and Technology*, **68**(2008)1463-1470
- Zheng, R. R., Wu, Y., Liao, S. L., Wang, W. Y., Wang, W. B., & Wang, A. H., "Microstructure and Mechanical Properties of Al/(Ti,W)C Composites Prepared by Microwave Sintering," *Journal of Alloys and Compounds*, **590**(2014) 168-175
- Zhu, H., & Chen, G., "Microstructures and Dry Sliding Wear Properties of  $\text{ZrB}_2/\text{A356}$  Composites Synthesized by Magneto-Chemistry In Situ Reaction," *Journal of Wuhan University of Technology-Mater. Sci. Ed.*, **28**(2013) 384-388
- Zhu, H., Jar, C., Song, J., Zhao, J., Li, J., & Xie, Z., "High Temperature Dry Sliding Friction and Wear Behavior of Aluminium Matrix Composites ( $\text{Al}_3\text{Zr}+\text{Al}_2\text{O}_3$ )/Al," *Tribology International*, **48**(2012)78-86
- Zhu, Z., "A Literature Survey on Fabrication Methods of Cast Reinforced Metal Composites," Proceedings of the International Conference on Advances in Cast Reinforced Metal Composites, ASM, Chicago, 1988, pp. 93–99.