

## ***Bibliography***

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A. C. Hanzi, I. Gerber, M. Schinhammer, J. F. Lofer, and P. J. Uggowitzer, “On the in vitro and in vivo degradation performance and biological response of new biodegradable MgY-Zn alloys,” *Acta Biomaterialia*, 2010, 6, 1824-1833.

A. Gokce and F. Findik, “Mechanical and physical properties of sintered aluminum powders,” *J. Achiev. Mater. Manuf.*, 2008, 30, 157-164.

A. Gokce, F. Findik, “Mechanical and physical properties of sintered aluminum powders,” *J. of Achiev.in Mater.and Manuf. Eng.*, 2008, 30, 157–164.

A. Hassani, E. Bagherpour, and F. Qods, “Influence of Pores on Workability of Porous Al/SiC Composites Fabricated Through Powder Metallurgy+ Mechanical Alloying,” *Jr. of Alloys and Comp.*, 2014, 591, 132–142.

A. Hoppe, B. Jokic, D. Janackovic, T. Fey, P. Greil, S. Romeis, J. Schmidt, W. Peukert, J. Lao, E. Jallot, A.R. Boccaccini, “Cobalt-releasing 1393 bioactive glass derived scaffolds for bone tissue engineering applications,” *ACS Appl. Mater. Interf.*, 2014, 6, 2865–2877.

A. Nouri, C. Wen, “Surfactants in mechanical alloying/milling: A catch-22 situation,” *Crit. Rev. Solid State Mater. Sci.*, 2014, 39, 81–108.

A. Pola, M. Tocci, and F.E. Goodwin, “Review of Microstructures and Properties of Zinc Alloys,” 2020, 253(10), 1-16.

A. Tarushi , G. Psomas , C. P. Raptopoulou and D. P. Kessissoglou , “Zinc complexes of

the antibacterial drug oxolinic acid: structure and DNA-binding properties,” *J. Inorg. Biochem.*, 2009, 103 , 898 —905.

A.S.M.N. and D.N.M. J. B.Shamsul, “Mg-Zn based composites reinforced with bioactive glass (45S5) fabricated via powder metallurgy,” *Acta Biomater.* 1996, 15, 1122–1125.

ASTM C 1674-11 Standard Test Method for Flexural Strength of Advanced Ceramics with Engineered Porosity (Honeycomb Cellular Channels) At Ambient Temperatures.

ASTM E3484-99 A. Standard test method for micro indentation hardness of materials. 1984.

B. Bobic, A. Vencl, M. Babic, S. Mitrovic, I. Bobic, “The Influence of Corrosion on the Microstructure of Thermally Treated ZA27/SiCp Composites,” *Tribol. Ind.*, 2014, 36, 33-39.

B. Bobic, M. Babic, S. Mitrovic, N. Ilic, I. Bobic, and M.T. Jovanovic, “Microstructure and mechanical properties of Zn<sub>25</sub>Al<sub>3</sub>Cu based composites with large Al<sub>2</sub>O<sub>3</sub> particles at room and elevated temperatures,” *Int. J. Mat. Res.*, 2010, 12, 1524-1531.

B. C. Kandpal, J. Kumar, and H. Singh, “Machining of Aluminium Metal Matrix Composites with Electrical Discharge Machining-A Review,” *Materials Today: Proceedings*, 2015, 2, 1665–1671.

B. Cullity, “Elements of X-ray Diffraction,” London Addison and Wesley, 1956.

B. Heublein, R Rohde, V Kaese, et al., “Biocorrosion of magnesium alloys: a new

principle in cardio-vascular implant technology ?,” *Heart.*, 2003, 89, 651-656.

B. Wegener, B. Sievers, S. Utzschneider, P. Müller, V. Jansson, S. Rößler, B. Nies, G. Stephani, B. Kieback, P. Quadbeck, “Microstructure, cytotoxicity and corrosion of powder-metallurgical iron alloys for biodegradable bone replacement materials,” *Mater. Sci. Eng. B*, 2011, 176, 1789–1796.

B.K Prasad, “Investigation into sliding wear performance of zinc based alloy reinforced with SiC particles in dry and lubricated conditions,” *Wear*, 2007, 262, 262–273.

B.K Prasad, O.P. Modi, and H.K. Khaira, “High-stress abrasive wear behavior of a zinc-based alloy and its composite compared with a cast iron under varying track radius and load conditions,” *Mater SciEng A.*, 2004, 381, 343–354.

B.K. Prasad, S. Das, O.P. Modi, A.K. Jha, R. Dasgupta, and A.H. Yegneswaran, “Wear Response of a Zn-Base Alloy in the Presence of SiC Particle Reinforcement: A Comparative Study with a Copper-Base Alloy,” *J. Mater. Eng. Perform.*, 1999, 8, 693-700.

B.M. Girish, K.R. Prakash, B.M. Satish, P.K. Jain, and K Devi, “Need for optimization of graphite particle reinforcement in ZA-27 alloy composites for tribological applications,” *Mater. Sci. and Eng.: A*, 2011, 530, 382-388.

C. Dharmayanti, T. A. Gillam, D. B. Williams, A. Blencowe, “Drug-Eluting Biodegradable Implants for the Sustained Release of Bisphosphonates,” *Polymers*, 2020, 12, 2930.

C. Di Mario, H.U.W. Griffiths, O. Goktekin, et al., “Drug-eluting bioabsorbable magnesium stent,” *J. Interv. Cardiol.*, 2004, 6, 17.

C. Gao, M. Yao, C. Shuaia, S. Pengd, and Y. Deng, “Nano-SiC reinforced Zn biocomposites prepared via laser melting: Microstructure, mechanical properties and biodegradability,” *J. of Mater. Sci. & Tech.*, 2019, 35, 2608–2617.

C. Yafa, J.G. Farmer, “A comparative study of acid-extractable and total digestion methods for the determination of inorganic elements in peat material by inductively coupled plasma-optical emission spectrometry,” *Anal. Chim.Acta.*, 2006, 557, 296–303.

C. Zhao, F. Pan, L. Zhang, H. Pan, K. Song, and A. Tang, “Microstructure, mechanical properties, bio-corrosion properties and cytotoxicity of as-extruded Mg-Sr alloys,” *Mater. Sci. Eng. C*, 2017, 70, 1081-1088.

C.P. Ling, M.B. Bush, D.S. Perera, “The Effect of Fabrication Techniques on the Properties of Al-SiC Composites,” *J. Mater. Process.Technol.*, 1995, 48, 325–331.

C.R.K Mohan, P. K. Bajpai, “Effect of sintering optimization on the electrical properties of bulk  $axSr_{1-x}TiO_3$  ceramics,” *Physica B*, 2008, 403, 2173–2188.

Chapter 2 Interrelationships among Density, Porosity, Remaining Moisture Content, Pressure and Depth, *Dev. Sedimentol.*, 1974, 16, 31–86.

D. Dziuba, A. Meyer-Lindenberg, J. M. Seitz, H. Waizy, N. Angrisani, and J. Reifenrath, “Long-term in vivo degradation behavior and biocompatibility of the magnesium alloy

ZEK100 for use as biodegradable bone implant,” *Acta Biomaterialia*, 2013, 9,8548–8560.

D. M Morens, G. K Folkers, A. S Fauci, “Emerging Infections: A Perpetual Challenge,” *Lancet Infect. Dis.*,2008, 8, 710–719.

D. Vojtech, J. Kubasek, J. Serak, P. Novak, “Mechanical and corrosion properties of newly developed biodegradable Zn-based alloys for bone fixation,” *ActaBiomater.*, 2011, 7, 3515–3522.

D. Zander, N.A. Zumdick, “Influence of Ca and Zn on the microstructure and corrosion of biodegradable Mg–Ca–Zn alloys,” *Corros. Sci.*,2015, 93, 222–233.

D.E Garcia, A.N. Klein, D. Hotza, “Advanced ceramics with dense and fine-grained microstructures through fast firing”, *Rev Adv. Mater. Sci.*, 2012, 30, 273–281.

D.J. Veljovic, B. Jokic, R. Petrovic, E. Palcevskis, A. Dindune, I.N. Mihailescu, Dj. Janac kovic, “Processing of dense nanostructured HA ceramics by sintering and hot pressing,” *Ceram. Int.*, 2009, 35, 1407-1413.

D.W. Budworth, “The selection of grain-growth control additives for the sintering of ceramic,” *Mineral. Mag.* 1970, 37, 833–838.

E. G. Brandt, M. Hellgren , T. Brinck , T. Bergman and O. Edholm, “Molecular dynamics study of zinc binding to cysteines in a peptide mimic of the alcohol dehydrogenase structural zinc site,” *Phys. Chem. Chem. Phys.*, 2009, 11 , 975 —983.

E. George and I. Baker, “Intermetallics: Iron Aluminides,” *The Encyclopedia of Materials*

*Science*”, 2001, 169, 4201–4205.

E. L. Zhang, L. P. Xu, G. N. Yu et al., “In vivo evaluation of biodegradable magnesium alloy bone implant in the first 6 months implantation,” *Jr. of Biomed. Mater. Res. Part A*, 2009, 90A, 882–893.

E. Reufi, and I. Thomas, “Evaluation of Modulus of Elasticity by Non-Destructive Method of Hybrid Fiber Reinforced Concrete,” *Int. J. Adv. Chem. Eng. Biol. Sci.*, 2016, 3, 1–4.

E.D. Farmer, & A.H. Webb, “Zinc passivation and the effect of mass transfer in flowing electrolyte,” *Journal of Applied Electrochemistry*, 1972, 2, 123–136.

E.L. Zhang, W. He, H. Du, K. Yang, “Microstructure, mechanical properties and corrosion properties of Mg–Zn–Y alloys with low Zn content,” *Mater. Sci. Eng. A*, 2008, 488, 102–111.

M. M. Avedesian and H. Baker, *ASM Specialty Handbook: Magnesium and Magnesium Alloy*, 1999.

F. Witte, F. Feyerabend, P. Maier, J. Fischer, M. Stormer, C. Blawert, W. Dietzel, N. Hort, “Biodegradable magnesium-hydroxyapatite metal matrix composites,” *Biomaterials*, 2007, 28, 2163–2174.

F. Witte, J. Fischer, J. Nellesen et al., “In vitro and in vivo corrosion measurements of magnesium alloys,” *Biomaterials*, 2006, 27, 1013–1018.

F. Witte, J. Reifenrath, P.P. Müller, H.A. Crostack, J. Nellesen, F.W. Bach, D. Bormann, M. Rudert, “Cartilage repair on magnesium scaffolds used as a subchondral bone replacement,” *Materwiss. Werksttech.*, 2006, 37, 504–508.

F. Witte, V. Kaese, H. Haferkamp et al., “In vivo corrosion of four magnesium alloys and the associated bone response,” *Biomaterials*, 2005, 26, 3557–3563.

F. Witte, V. Kaese, H. Haferkamp, E. Switzer, A. Meyer-Lindenberg, C.J. Wirth, H. Windhagen, “In vivo corrosion of magnesium alloys and the associated bone response, *Biomaterials*,” Vol. 26, No. 17, (2005), p.3557-3563.

A. Chaya, S. Yoshizawa, K. Verdelis, N. Myers, B.J. Costello, D.T. Chou, et al., “In vivo study of magnesium plate and screw degradation and bone fracture healing.” *Acta Biomater.*, 2015, 18, 262–269.

B.M. Girish, K.R. Prakash, B.M. Satish, P.K. Jain, and K Devi, “Need for optimization of graphite particle reinforcement in ZA-27 alloy composites for tribological applications,” *Mater. Sci. Eng.: A*, 2011, 530, 382-388.

D. Zhang, C. Brindley, and B. Cantor, “The microstructures of aluminium alloy metal-matrix composites manufactured by squeeze casting,” *J. Mater. Sci.*, 1993, 28, 2267–2272.

G. He, Y. Wu, Y. Zhang, Y. Zhu, et al., Addition of Zn to the ternary Mg–Ca–Sr alloys significantly improves their antibacterial properties, *J. Mater. Chem. B*, 2015, 3, 6676–6689.

G. J. Zhang, Z.Z Jin, and X.M Yue, "Reaction synthesis of TiB<sub>2</sub>-SiC composites from TiH<sub>2</sub>-Si-B<sub>4</sub>C," *Mater.Lett.*, 1995, 25, 97–100.

G. Lubin, Handbook of Composites. Springer Science & Business Media, 2013.

G. Song and A. Atrens, "Corrosion Mechanisms of Magnesium Alloys", *Adv. Engg. Mater.* 1999, 1, 11-33.

G. Song, "Control of biodegradation of biocompatible magnesium alloys," *Corros. Sci.*, 2007, 49, 1696–1701.

G. Xn, L. N. Z. Wr, et al., "Corrosion resistance and surface biocompatibility of a microarc oxidation coating on a Mg-Ca alloy," *Act. Biomater.*, 2010, 7, 1880-1889.

G.Y. Yuan, A. Inoue, "The effect of Ni substitution on the glass-forming ability and mechanical properties of Mg–Cu–Gd metallic glass alloys," *J. Alloys Compd.*, 2005, 387, 134–138.

H. Gheisari, E. Karamian, "Characterization and Mechanical Behavior of Fly Ash-Alumina Reinforced Zn-27Al Alloy Matrix Hybrid Nano composite Using Stir-Casting Technique," *Int. J. Bio-Inorg. Hybr. Nanomater.*, 2015, 4, 79-85.

H. H. M. Cleveringa, Vander Giessen E and A. Needleman, "Comparison of discrete dislocation and continuum plasticity predictions for a composite material," *Acta Mater.* 1997, **45**, 3163–79.

H. Hu, X. Nie, Y. Ma, "Corrosion and Surface Treatment of Magnesium Alloys," *Magnesium Alloys - Properties in Solid and Liquid States*, 2014.

H. Ismaeel, M. Khattak, M. Tamin, M. Khan, N. Iqbal, S. Kazi, S. Badshah, and R. Khan, “Energy Absorption Ability of Thin-Walled Square Hollow Section of Low Carbon Sheet Metals under Quasi-Static Axial Compression,” *Jr. of Adv. Res. in Applied. Mech.*, 2016, 18,1–14.

H. Naceur, A. Megriche, M. E.L Maaoui, “Effect of sintering temperature on microstructure and electrical properties of  $Sr_{1-x}(Na_{0.5}Bi_{0.5})_xBi_2Nb_2O_9$  solid solutions,” *J. of Adv. Ceramic.*, 2014, 3, 17–30.

H. Nakashima, Y. Yukawa, S. Imagama, T. Kanemura, M. Kamiya, et al., “Complications of cervical pedicle screw fixation for non-traumatic lesions: a multicenter study of 84 patients,” *J Neurosurg Spine*, 2012, 16, 238–47.

H. Rahman, and A H. M. Rashed, “Characterization of silicon carbide reinforced aluminum matrix composites,” *Procedia Engineering*, 2014, 90, 103–109.

H. S. Brar , J. Wong and M. V. Manuel, “Investigation of the mechanical and degradation properties of Mg-Sr and Mg-Zn-Sr alloys for use as potential biodegradable implant materials,” *J. Mech. Behav. Biomed. Mater.*, 2012, 7 , 87-95.

H. Tamai, K. Igaki, E. Kyo, et al., “Initial and 6-month results of biodegradable poly-l-lactic acid coronary stents in humans,” *Circulation*. 2000, 102, 399-404.

H. Tripathi, C. Rath, A.S. Kumar, P.P. Manna, S.P. Singh, “Structural, physico-mechanical and in-vitro bioactivity studies on  $SiO_2-CaO-P_2O_5-SrO-Al_2O_3$  bioactive glasses,” *Mater. Sci. Eng. C.*, 2019, 94, 279–290.

H. Wang and Z. Shi, "In vitro biodegradation behavior of magnesium and magnesium alloy," *J of Biomed. Mater. Res. Part B: Applied. Biomater.*, 2011, 98, 203– 209, 2011.

H.J. Flitt, D.P. Schweinsberg, "A guide to polarization curve interpretation: Deconstruction of experimental curves typical of the Fe/H<sub>2</sub>O/H<sup>+</sup>/O<sub>2</sub>corrosion system," *Corros. Sci.*, 2005, 47, 2125–2156.

H. Oonishi, L.L. Hench, J. Wilson, Sugihara, E. Tsuji, M.Matsuura, S.Kin, T.Yamamoto and S.Mizokawa and S.Mizokawa, "Quantitative comparison of bone growth behavior in granules of Bioglass, A-W glass-ceramic, and hydroxyapatite," *J Biomed. Mater. Res.*, 2000, 51, 37-46.

H.R.B. Rad, M.H. Idris, M.R.A. Kadir, S. Farahany, "Microstructure analysis and corrosion behavior of biodegradable Mg–Ca implant alloys," *Mater Des.*, 2012, 33, 88– 97.

H.S. Brar, M.O. Platt, M. Sarntinoranont, P.I. Martin, M.V. Manuel, "Magnesium as a biodegradable and bioabsorbable material for medical implants" *JOM* 2009; 61, 31-34.

H.X. Wang, S.K. Guan, X. Wang, C.X. Ren, L.G. Wang, "In vitro degradation and mechanical integrity of Mg-Zn-Ca alloy coated with Ca-deficient hydroxyapatite by the pulse electrode position process," *Acta Biomater.*, 2010, 6, 1743–1748.

I. D. Xynos, M.V. Hukkanen, J.J. Batten, L.L Hench, J.M. Polak, "Bioglass 45S5 stimulates osteoblast turnover and enhances bone formation in vitro: Implications and applications for bone tissue engineering," 2000, 67, 321-329.

I. S. Berglund , H. S. Brar , N. Dolgova , A. P. Acharya , B. G. Keselowsky , M. Sarntinoranont and M. V. Manuel, “Synthesis and characterization of Mg-Ca-Sr alloys for biodegradable orthopedic implant applications,” *J. Biomed. Mater. Res. Part B*, 2012, 100, 1524-1534.

I. Shogo, Y. Michiaki, K. Yoshihito, “Relation between corrosion behavior and microstructure of Mg–Zn–Y alloys prepared by rapid solidification at various cooling rates,” *Corr. Sci.*, 2009, 51, 395–402.

I. Singh, D. Mandal, M. Singh, S. Das, “Influence of SiC Particles Addition on the Corrosion Behavior of 2014 Al-Cu Alloy in 3.5% NaCl Solution,” *Corr. Sci.*, 2009, 51, 234–241.

J. A. Xua , G. Ding , J. L. Li , S. H. Yang , B. S. Fang , H. C. Sun and Y. M. Zhou , *Appl. Surf. Sci.*, 2010, 256, 7540-7544.

J. Cortes, E. Valencia, “Phenomenological equations of the kinetics of heterogeneous adsorption with interaction between adsorbed molecules,” *Phys. Rev. B.*, 1995, 51, 2621–2623.

J. d. Torralba, C. Da Costa, and F. Velasco, “P/M Aluminum Matrix Composites: An Overview,” *J of Mater. Process. Tech.*, 2003, 133, 203–206.

J. Jaroszewicz, and A. Michalski, “Preparation of a TiB<sub>2</sub> composite with a nickel matrix by pulse plasma sintering with combustion synthesis,” *J. Eur. Ceram. Soc.*, 2006, 26, 2427–2430.

J. Li, Y. Song, S. Zhang et al., "In vitro responses of human bone marrow stromal cells to a fluoridated hydroxyapatite coated biodegradable Mg-Zn alloy," *Biomater.*, 2010, 22, 5782–5788.

J. Nriagu, Zinc Deficiency in Human Health BT- Encyclopedia of Environmental *Health*, 2011, 789–800.

J. R. Lentino, "Prosthetic Joint Infections: Bane of Orthopedists, Challenge for Infectious Disease Specialists," *Clin. Infect. Dis.*, 2003, 36, 1157–1161.

J. Rho, R. Ashman, C. Turner, "Young's modulus of trabecular and cortical bone material," *J. Biomech.*, 1993, 26, 111–119.

J. Vormann, "Magnesium: nutrition and metabolism," *Mol. Asp. Med.*, 2003, 24, 27-37.

J. W. Agha, H.C. Knowles, G. Alverson, "The mineral content of Normal human bone," *J Clin Invest.*, 1958, 37, 1357–1361.

J. Yang, F. Cui, I.S. Lee, Y. Zhang, Q. Yin and H. Xia 2012 *J. Biomater. Appl.* 27 153

J.A. Floro, C.V. Thompson, R. Carel, et al., "Competition between strain and interface energy during epitaxial grain growth in Ag films on Ni(001)," *J. Mater. Res.*, 1994, 9, 2411–2424.

J.A. Floro, C.V. Thompson, R. Carel, et al., "Competition between strain and interface energy during epitaxial grain growth in Ag films on Ni (001)," *J. Mater. Res.*, 1994, 9, 2411–2424.

J.B. Park, Hard Tissue Replacement Implants, *Biomater. Sci. Eng.*, 1984, 12 357–358.

J.C. Alvarenga, S.K. Boyd, R.M.R Pereira, The relationship between estimated bone strength by finite element analysis at the peripheral skeleton to areal BMD and trabecular bone score at lumbar spine, *Bone*, 2017, 117, 47-53.

J.F. Loffler, "Bulk metallic glasses," *Intermetallics*, 2003, 11, 529-540.

J.L. Katz, "Anisotropy of Young's modulus of bone," *Nature*, 1980, 283, 5742.

J.M. Anderson, A. Rodriguez and D.T Chang, Foreign body reaction to biomaterials, *Semin. Immunol.*, 2008, 86-100.

J.W. Kaczmar, K. Pietrzak, W. Włosiński, "Production and application of metal matrix composite materials," *J. Mater. Process. Technol.*, 2000, 106, 58–67.

J. Wang, L.G. Wang, S.K. Guan, S.J. Zhu, C.X. Ren, S. Hou, "Microstructure and corrosion properties of as sub-rapid solidification Mg–Zn–Y–Nd alloy in dynamic simulated body fluid for vascular stent application," *J. Mater. Sci. Mater. Med.*, 2001, 21, 2001–2008.

K. Abumi, Y. Shono, M. Ito, H. Taneichi, et al., "Complications of pedicle screw fixation in reconstructive surgery of the cervical spine," *Spine*, 2000, 25, 962–969.

K. Kornaus, G. Grabowski, R. Marian, and A. Gubernat, "Mechanical properties of hot-pressed SiC-TiC composites," *Process. Appl. Ceram.*, 2017, 11, 329–336.

K. Krishnan, S.S. Sahay, S. Singh S, et al., "Modeling the accelerated cyclic annealing kinetics," *J. Appl. Phys.* 2006, 100, 093505.

K. Yamaguchi, N. Takakura and S. Imatami, Compaction and Sintering Characteristics of Composite Metal Powders. *J. of Mater. Process. Technol.* 1997, 63, 364-369.

K.K. Alaneme, B.O. Fatile, and, J.O. Borode, “Mechanical and Corrosion Behaviour of Zn-27Al Based Composites Reinforced with Groundnut Shell Ash and Silicon Carbide,” *Tribol. Ind.*, 2014, 36, 195-203.

K.K. Alaneme, O.J. Ajayi, “Microstructure and mechanical behavior of stir-cast Zn–27Al based composites reinforced with rice husk ash, silicon carbide, and graphite,” *J. of King Saud Univ. – Eng. Sci.*, 2017, 29, 172–177.

L. Hallmann, P. Ulmer, E. Reusser E, et al., “Effect of dopants and sintering temperature on microstructure and low temperature degradation of dental Y-TZP-zirconia,” *J. Eur. Ceram. Soc.*, 2012, 32, 4091–4104.

L. L. Hench, C. G. Pantano Jr., P. J. Buscemi, D. C. Greenspan, “Analysis of bioglass fixation of hip prostheses,” *J. Biomed. Mater. Res.*, 1972, 11, 267-282.

L. Sennerby, P. Thomsen, L.E. Ericson, “A morphometric and biomechanic comparison of titanium implants inserted in rabbit cortical and cancellous bone,” *Int. J. Oral Maxillofac. Implant.*, 1992, 7, 62–71.

L. Tan, X. Yu, P. Wan, and K. Yang, “Biodegradable Materials for Bone Repairs: A Review,” *J. of Mater. Sci. and Tech.*, 2013, 29, 503–513.

L.C. Gerhardt and A. R. Boccaccini, “Bioactive Glass and Glass-Ceramic Scaffolds for Bone Tissue Engineering,” *Materials* 2010, 3, 3867-3910.

L.H. Hihara, Corrosion of Metal Matrix Composites, in: ASM Handbook Vol. 13 B, Corrosion: Materials, ASM International, 2005, 526-542.

L. L. Hench, An Introduction to Bioceramics (2nd edition), Imperial College Press, London, United Kingdom, 2013.

M. Bamberger, G. Dehm, "Trends in the development of new Mg alloys," *Annu. Rev. Mat. Res.* 2008, 38, 505–533.

M. Geetha, A.K. Singh, R. Asokamani, A.K. Gogia, "Ti based biomaterials the ultimate choice for orthopaedic implants – a review," *Prog. Mater. Sci.*, 2009, 54, 397-425.

M. Hambidge, "Zinc and Health: Current status and future directions," *J. Nutr.*, 2000, 130, 1344S-1349S.

M. J. Imola, D.D. Hamlar, W. Shao, K. Chowdhury, S. Tatum, "Resorbable plate fixation in pediatric craniofacial surgery: long-term outcome," *Arch. Facial Plast. Surg.*, 2001, 3, 79–90.

M. Katsikogianni, Y. F. Missirlis, Concise Review of Mechanisms of Bacterial Adhesion to Biomaterials and of Techniques Used in Estimating Bacteria material Interactions. *Eur. Cells. Mater.*, 2004, 8, 37–57.

M. M. Almoudi, A.S. Hussein, M.I.A. Hassan, and N.M. Zain, "A systematic review on antibacterial activity of zinc against *Streptococcus mutans*," *The Saudi Dental Journ*, 2018, 30, 283-291.

M. Mouanga, P. Bercot, & J. Y. Rauch, “Comparison of corrosion behaviour of zinc in NaCl and in NaOH solutions. Part I: Corrosion layer characterization,” *Corr. Sci.* 2010, 52, 3984–3992.

M. Niinomi, “Mechanical biocompatibilities of titanium alloys for biomedical applications,” *J. Mech. Behav. Biomed. Mater.*, 2008, 1, 30–42.

M. Ramy, S.G. Sarwat, V. Udhayabanub, S. Subramanian, “Role of partially amorphous structure and alloying elements on the corrosion behavior of Mg–Zn–Ca bulkmetallic glass for biomedical applications,” *Mater. Des.*, 2015, 86, 829–835.

M. ShahediAsl, Z. Ahmadi, S. Parvizi, Z. Balak, and I. Farahbakhsh, “Contribution of SiC particle size and spark plasma sintering conditions on grain growth and hardness of TiB<sub>2</sub> composites,” *Ceram. Int.*, 2017, 43, 13924–13931.

M. Surappa, “Aluminium Matrix Composites: Challenges and Opportunities,” *Sadhana*, 2003, 28, 319–334.

M. Thomann, C. Krause, N. Angrisani, D. Bormann, et al., “Influence of a magnesium-fluoride coating of magnesium-based implants (MgCa<sub>0.8</sub>) on degradation in a rabbit model,” *J. Biomed. Mater. Res.* 2010, 93, 1609-1619.

M.B. Kannan, C. Moore, S. Saptarshi, S. Somasundaram, M. Rahuma, A.L. Lopata, “Biocompatibility and biodegradation studies of a commercial zinc alloy for temporary mini-implant applications,” *Scientific Report*, 2017, 7, 1–11.

M.G. Jiang, C. Xu, T. Nakata, H. Yan, R.S. Chen, S. Kamado, “Development of dilute Mg-Zn-Ca-Mn alloy with high performance via extrusion,” *J. Alloys Compd.*, 2016, 668, 13–21.

M.M. El-Omar, G. Dangas, I. Iakovou, R. Mehran, “Update on in-stent restenosis,” *Curr. Intervent. Cardiol. Rep.*, 2001, 4, 296e305.

M.P. Staiger, A.M. Pietak, J. Huadmai, G. Dias, “Magnesium and its alloys as orthopedic biomaterials: A review,” *Biomaterials*. 2006, 27, 1728–1734.

M.R. Majhi, R. Pyare, S.P. Singh, “Studies on preparation and characterizations of CaO-Na<sub>2</sub>O-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub> bioglass ceramics substituted with Li<sub>2</sub>O, K<sub>2</sub>O, ZnO, MgO and B<sub>2</sub>O<sub>3</sub>,” *Int. J. Eng. Res.*, 2015, 2, 1-9.

N. A. C. Lah, and M.H. Hussin, “Titanium and titanium based alloys as metallic biomaterials in medical applications – spine implant case study, *Pertanika J. Sci. Technol.*, 2019, 27, 459–472.

N. D. Tomashov, “Theory of corrosion and protection of metals”, The Macmillan Company, New York, 1966.

N. Hua, W. Chen, Q. Wang, “Tribo corrosion behaviors of a biodegradable Mg<sub>65</sub>Zn<sub>30</sub>Ca<sub>5</sub> bulkmetallic glass for potential biomedical implant applications,” *J. Alloys Compd.*, 2018, 745, 111–120.

N. Jones, B. Ray, K.T. Ranjit, A.C. Manna, “Antibacterial Activity of ZnO Nanoparticle Suspensions on a Broad Spectrum of Microorganisms,” *FEMS Microbiol. Lett.*, 2008, 1, 71–76.

N. Karni, G.B. Barkay, and M. Bamberger, Structure and properties of metal-matrix composites, *J. of Mater. Sci. Letter.*, 1994, 13, 541-544.

N. M. Kumar, S. S. Kumaran, and L. Kumaraswamidhas, “An Investigation of Mechanical Properties and Corrosion Resistance of Al2618 Alloy Reinforced with Si3N4, AlN and ZrB2 Composites,” *J. Alloys. Compd.* 2015, 652, 244–249.

N. Saheb, Z. Iqbal, A. Khalil, A.S. Hakeem, N. Al Aqeeli, T. Laoui, A. Al-Qutub, and R. Kirchner, “Spark plasma sintering of metals and metal matrix nano composites: a review,” *J. Nanomater.*, 2012, 18, 1-13.

N.J. Shaw, “Densification and coarsening during solid state sintering of ceramics: A review of the models III. Coarsening,” *Int. J Powder Metal.*, 1989, 21, 25–29.

N.S. Murni, M.S. Dambatta, S.K. Yeap, G.R.A. Froemming, H. Hermawan, “Cytotoxicity evaluation of biodegradable Zn-3Mg alloy toward normal human osteoblast cells,” *Mater. Sci. Eng. C.*, 2015, 49, 560–566.

N.T. Kirkland, N. Birbilis, M.P. Staiger, “Assessing the corrosion of biodegradable magnesium implants: a critical review of current methodologies and their limitations,” *Acta Biomater.*, 2012, 8, 925e936.

P. Istomin, A. Nadutkin, and V. Grass, “Fabrication of Ti3SiC2-based Ceramic Matrix Composites by a Powder-free SHS Technique,” *Ceramics International*, 2013, 39 (4), 3663–3667.

P. J. Marie, "Strontium as therapy for osteoporosis," *Curr. Opin. Pharmacol.*, 2005, 5, 633-637.

P. J. Marie, M. T. Garba , M. Hott and L. Miravet, "Effect of low doses of stable strontium on bone metabolism in rats," *Miner. Electrolyte Metab.*, 1985, 11, 5-13.

P. Kathirvel, J. Chandrasekaran, D. Manoharan, S. Kumar, "Deposition and characterization of alpha alumina thin films prepared by chemical bath deposition," *J. Light and Electron Optics* , 2015, 2177-2179.

P. Kazemian, S. Mentink, C. Rodenburg, and C. Humphreys, "Quantitative Secondary Electron Energy Filtering in a Scanning Electron Microscope and Its Applications," *Ultramicroscopy*, 2007, 107, 140–150.

P. Paliwal, A.S. Kumar, H. Tripathi, S.P. Singh, S.C.U. Patne, S. Krishnamurthy, "Pharmacological application of barium containing bioactive glass in gastro-duodenal ulcers," *Mater. Sci Eng. C Mater. Biol Appl.*. 2018,92.

P. Peeters, M. Bosiers, J. Verbist, K. Deloose, B. Heublein, "Preliminary results after application of absorbable metal stents in patients with critical limb ischemia," *J. Endovasc. Ther.* 2005, 12 1-5.

P. Sepulveda, J.R. Jones, L.L. Hench, "Bioactive sol-gel foams for tissue repair," *J. Biomed. Mater. Res.*, 2002, 59, 340–348.

P. Yin , N. F. Li , T. Lei , L. Liu and C. Ouyang, “Effects of Ca on microstructure, mechanical and corrosion properties and biocompatibility of Mg–Zn–Ca alloys.” *J. Mater. Sci.: Mater. Med.*, 2013, **24** , 1365 —1373.

P.K. Bowen, J. Drelich, J. Goldman, “Zinc exhibits ideal physiological corrosion behavior for bioabsorbable stents,” *Adv. Mater.*, 2013, *25*, 2577–2582.

Properties of Magnesium And Magnesium Alloys." National Research Council. 1975. Trends in Usage of Magnesium. Washington, DC: The National Academies Press.

Q. Chen, G. A. Thouas, “Metallic implant biomaterials,” *Mater. Sci. Eng. R Rep.*, 2015, *87*, 1–57.

Q. Peng, Y. Huang, L. Zhou, N. Hort, and K. U. Kainer, “Preparation and properties of high purity Mg-Y biomaterials,” *Biomater.*, 2010, *31*, 398–403.

Q. Qu, L. Li, W. Bai, C. Yan, C.N. Cao, “Effects of NaCl and NH<sub>4</sub>Cl on the initial atmospheric corrosion of zinc,” *Corros. Sci.* 2005, *47*, 2832–2840.

Q. Wang, Q. Wang, X. Zhang, et al., “The effect of sintering temperature on the structure and degradability of strontium-doped calcium polyphosphate bioceramic,” *Ceram-Silikaty.*, 2010, *54*, 97–102.

Q. Zhao, X. Guo, X. Dang, J. Hao, J. Lai, K. Wang, “Preparation and properties of composite MAO/ECD coatings on magnesium alloy,” *Colloids Surfaces B Biointerfaces.*, 2013, *102*, 321–326.

Q. Zheng, S. Cheng, J.H. Stradere, E. Ma, J. Xua, “Critical size and strength of the best bulk metallic glass former in the Mg–Cu–Gd ternary system,” *Scr. Mater.*, 2007, 56, 161–164.

R. Bjork, V. Tikare, H.L. Frandsen, N. Pryds, “The effect of particle size distributions on the microstructural evolution during sintering,” *J. of the American Ceramic Soc.*, 2013, 96, 103-110.

R. David, V. Shrivastava, R. Dasgupta, B.K. Prasad, and I.B. Singh, “Corrosion Investigation of Zinc–Aluminum Alloy (ZA-27) Matrix Reinforced with In Situ Synthesized Titanium Carbide Particle Composites,” *J. Mater. Eng. Perform.*, 2019, 28, 2356–2364.

R. Erbel, C. Di Mario, J. Bartunek, et al., “Temporary scaffolding of coronary arteries with bioabsorbable magnesium stents: a prospective, non-randomised multi-centre trial,” *Lancet* 2007,69, 1869-1875.

R. Hedayati, S.M. Ahmadi, K. Lietaert, et al., “Fatigue and quasi-static mechanical behavior of bio-degradable porous biomaterials based on magnesium alloys,” *J. Biomed. Mater. Res. A*, 2018, 106, 1798-1811.

R. Hill, “An alternative view of the degradation of bioglass,” *J. Mater. Sci. Lett.*, 1996, 15, 1122–1125.

R. L. Kuncicka, Terry C. Lowe, “Advances in metals and alloys for joint replacement,” *Prog. Mater.Sci.*, 2017, 88, 230–280.

R. Orinakova, A. Orinak, L.M. Buckova, M. Giretova, L. Medvecký, E. Labbanczova, M. Kupkova, M. Hrubovcaková, K. Koval, “Iron based degradable foam structures for potential orthopedic applications,” *Int. J. Electrochem. Sci.*, 2013, 8, 12451–12465.

R. Ramachandran and M. Nosonovsky, “Coupling of Surface Energy with Electric Potential Makes Superhydrophobic Surfaces Corrosion-resistant,” *Physical Chemistry Chemical Physics*, 2015, 17, 24 988–24 997.

R. Walter and M. B. Kannan, “In-vitro degradation behaviour of WE54 magnesium alloy in simulated body fluid,” *Mater. Lett.*, 2011, 65, 748–750.

R.A. Ahmed, A.M. Fekry, R. Farghali, “A study of calcium carbonate/multiwalled carbon nanotubes/chitosan composite coatings on Ti–6Al–4V alloy for orthopedic implants,” *Appl. Surf. Sci.*, 2013, 285, 309–316.

R.F. Heary, N. Parvathreddy, S. Sampath, N. Agarwal, “Elastic modulus in the selection of inter body implants,” *J. Spine Surg.*, 2017, 3, 163–167.

S. Cai, T. Lei, N. Li, and F. Feng, “Effects of Zn on microstructure, mechanical properties and corrosion behavior of MgZn alloys,” *Mater. Sci. and Engg.C*, 2012, 32, 2570–2577.

S. G. Dahl, P. Allain, P. J. Marie, Y. Mauras, et al., “Incorporation and distribution of strontium in bone,” *Bone*, 2001, 28, 446 – 453.

S. L. Flegler, J. W. Heckman Jr, and K. L. Klomparens, *Scanning and Transmission Electron Microscopy: An Introduction*, Oxford University Press (UK), 1993, 225.

S. Marchesini, H. He, H. N. Chapman, S. P. Hau-Riege, A. Noy, M. R. Howells, U. Weierstall, and J. C. Spence, “X-ray Image Reconstruction From a Diffraction Pattern Alone,” *Physical Review B*, 2003, 68, 140101.

S. Sahu, M.D. Goel, D.P. Mondal, and, S. Das, “High temperature compressive deformation behavior of ZA 27–SiC foam,” *Mat. Sci. and Eng. A*, 2014, 607, 162-172.

S. Sapuan, A. Leenie, M. Harimi, and Y. K. Beng, “Mechanical Properties of Woven Banana Fibre Reinforced Epoxy Composites,” *Materials & Design*, 2006, 27, 689-693.

S. Teoh, Fatigue of biomaterials: a review, *Int. J. Fatigue.*, 2000, 22, 825e837.

S. Tournis, “Improvement in bone strength parameters. The role of strontium ranelate,” *J. Musculoskeletal Neuronal Interact.*, 2007, 7 , 266 —267.

S. W. K. Morgan, “Zinc and Its Alloys and Compounds,” John Wiley & Sons, Toronto, 1985.

S. Wu , X. Liu , K.W.K. Yeung , H. Guo , P. Li , T. Hu , C.Y. Chung , P.K. Chu , “Surface nano-architectures and their effects on the mechanical properties and corrosion behavior of Ti-based orthopedic implants,” *Surf. Coat. Technol.*, 2013, 233 13–26.

S. Zhang, J. Li, Y. Song et al., “In vitro degradation, hemolysis and MC3T3-E1 cell adhesion of biodegradable Mg-Zn alloy,” *Mater. Sci. and Engg.C: Mater. for Bio. Appllication.*, 2009, 29, 1907–1912,.

S. Zhang, X. Zhang, C. Zhao, J. Li, Y. Song, C. Xie, H. Tao, Y. Zhang, Y. He, Y. Jiang, Y. Bian, "Research on an Mg-Zn alloy as a degradable biomaterial," *Acta Biomater.*, 2010, 6, 626–640.

S.C Tjong, and F. Chen, "Wear behavior of as-cast ZnAl27/SiC particulate metal-matrix composites under lubricated sliding condition," *Metall. Mater. Trans. A.*, 1997, 28A, 1951–1955.

S.C. Sharma, B.M. Girish, B.M. Satish, and R. Kamath, "Mechanical Properties of As-Cast and Heat-Treated ZA-27 Alloy/Short Glass Fiber Composites," *J. Mater. Eng. Perform.*, 1998, 7, 93-99.

S.C. Sharma, B.M. Girish, R. Kamath, and B.M. Satish, "Effect of SiC particle reinforcement on the unlubricated sliding wear behavior of ZA-27 alloy composites," *Wear.*, 1997, 213, 33–40.

S.C. Sharma, "Equation for the Density of Particle-Reinforced Metal Matrix Composites: A New Approach," *J. of Mater. Eng. and Perform.*, 2003, 12, 324-330.

S. E. Shirsath, R.H. Kadam, A.S. Gaikwad, et al., "Effect of sintering temperature and the particle size on the structural and magnetic properties of nanocrystalline Li<sub>0.5</sub>Fe<sub>2.5</sub>O<sub>4</sub>," *J. Magn.Mater.*, 2011, 323, 3104–3108.

S.M. Rabiee, N. Nazparvar, M. Azizian, D. Vashae, L. Tayebi, "Effect of ion substitution on properties of bioactive glasses: A review," *Ceram. Int.* 2015, 41, 7241–7251.

S.S. Owoeye, D.O. Folorunso, B. Oji, and S.G. Borisade, "Zinc-aluminum (ZA-27)-based metal matrix composites: a review article of synthesis, reinforcement, microstructural, mechanical, and corrosion characteristics," *The Int. J. of Adv. Manuf. Tech.*, 2018, 100, 2760-2769.

T. Dalgleish, J.M.G. Williams, A. M. J. Golden, et al., "Mechanical Characterization of biodegradable implants," *J. Exp. Psychol. Gen.*, 1992, 136, 23–42.

T. Hungria, J. Galy, A. Castro, "Spark plasma sintering as a useful technique to the nanostructuring of piezo-ferroelectric materials," *Adv. Eng. Mater.*, 2009, 11, 615–631.

T. J. Wood , G. A. Hurst , W. C. E. Schofield , et al., "Electroless deposition of multi-functional zinc oxide surfaces displaying photoconductive, superhydrophobic, photowetting, and antibacterial properties," *J. Mater. Chem.*, 2012, 22 , 3859 —3867.

T. Juutilainen, H. Päätilä, M. Ruuskanen, and P. Rokkanen, "Comparison of costs in ankle fractures treated with absorbable or metallic fixation devices," *Arch. Orthop. Trauma Surg.*, 1997, 116, 204–208.

T. Kehoe, J. Bryner, V. Reboud, J. Dual, C.M. Sotomayor Torres, "Nano-scale effects on Young's modulus of nano imprint polymers measured by photoacoustic metrology," *J. Phys. Conf. Ser.*, 2010, 2014, 11–16.

T. Kokubo, H. Kushitani, S. Sakka, T. Kitsugi and T. Yamamuro, "Solutions able to reproduce in vivo surface-structure changes in bioactive glass-ceramic A-W", *J. Biomed. Mater. Res.*, 1990, 24, 721-734.

T. N. Phan , T. Buckner , J. Sheng , J. D. Baldeck, R. E. Marquis, “Physiologic actions of zinc related to inhibition of acid and alkali production by oral streptococci in suspensions and biofilms,” *Oral Microbiol. Immunol.*, 2004, 19, 31-38.

T. Yan, L. Tan, D. Xiong, X. Liu, B. Zhang, and K. Yang, “Fluoride treatment and in vitro corrosion behavior of an AZ31B magnesium alloy,” *Mater. Sci. and Eng. C: Mater. for Bio. App.*, 2010, 30,740–748.

T.B.Matias, V. Roche, R.P. Nogueira, G.H. Asato, C.S. Kiminami, C. Bolfarini, W.J. Botta, “Mg-Zn-Ca amorphous alloys for application as temporary implant: effect of Zn content on the mechanical and corrosion properties,” *Mater. Des.*, 2016, 110, 188–195.

T.M. Bray, W.J. Bettger, “The physiological role of zinc as an antioxidant, Free Radical,” *Biol. Med.*, 1990, 8, 281–291.

T.T.T Trang, et al., “Designing a magnesium alloy with high strength and high formability,” *Nat. Comm.*, 2018, **9**, 2522.

V. Kuban, J. Komarek, D. Cajkova, “Determination of magnesium by flame AAS detection with flow injection analysis,” *Chemical. Papers*, 1990, 44, 339-346.

V. Sannakaisa, “Materials Science and Engineering: B Biodegradable Mg and Mg alloys: Corrosion and biocompatibility,” *Mater. Sci. Eng.*, 2011, 176, 1600–1608.

V.K. Singh and B. R. Reddy, “Synthesis and characterization of bioactive zirconia toughened alumina doped with HAp and fluoride compounds,” *Cer. Int.*, 2012, 38, 5333–5340.

W. A Ferrando, “Review of Corrosion and Corrosion Control of Magnesium Alloys and Composites”, *J. of Mater. Eng.*, 1989, 11, 299-313.

W. D. Callister Jr and D. G. Rethwisch, “Fundamentals of Materials Science and Engineering: An Integrated Approach,” John Wiley & Sons, 2012.

W. Ding, “Opportunities and challenges for the biodegradable magnesium alloys as next-generation biomaterials,” *Regen. Biomater.*, 2016, 3, 79-86.

W.D. Mueller, M. Lucia Nascimento, M.F. Lorenzo De Mele, Critical discussion of the results from different corrosion studies of Mg and Mg alloys for biomaterial applications, *Acta Biomater.* 2010, 6, 1749–1755.

W.F. Enneking, H. Burchardt, J.J. Puhl, G. Piotrowski, Physical and biological aspects of repair in dog cortical-bone transplants, *The J. of Bone and Jt. surg.*, 1975, 57, 237-252.

X. G. Zhang, “C o r r o s i o n and e l e c t r o c h e m i s t r y of zinc, Springer Science & Business Media,” LLC, 1996

X. Gu, Y. Zheng, Y. Cheng, S. Zhong, T. Xi, “In vitro corrosion and biocompatibility of binary magnesium alloys,” *Biomater.*, 2009, 30,484–498.

X. Liu, J. Sun, K. Qiu, Y. Yang, Z. Pu, L. Li, and Y. Zheng, “Effects of alloying elements (Ca and Sr) on microstructure, mechanical property and in vitro corrosion behavior of biodegradable Zn-1.5Mg alloy,” *J. Alloys Compd.*, 2016, 664, 444–452.

X. N. Gu, X. H. Xie, N. Li, Y. F. Zheng, and L. Qin, “In vitro and in vivo studies on a Mg-Sr binary alloy system developed as a new kind of biodegradable metal,” *Act. Biomater.*, 2012, 8, 2360–2374.

X.N. Gu, S.S. Li, X.M. Li, Y.B. Fan, “Magnesium based degradable biomaterials: A review,” *Front Mater Sci.*, 2014; 8: 200–218.

Y. Boonyongmaneerat, “Mechanical properties of partially sintered materials,” *Mat. Sci. Eng. A.*, 2007, 452, 773-780.

Y. Chen, W. Zhang, M.F. Maitz, M. Chen, H. Zhang, J. Mao, Y. Zhao, N. Huang, G. Wan, Comparative corrosion behavior of Zn with Fe and Mg in the course of immersion degradation in phosphate buffered saline, *Corr.. Sci.* 2016, 111, 541–555.

Y. Ding, C. Wen, P. Hodgson, and Y. Li, “Effects of alloying elements on the corrosion behavior and biocompatibility of biodegradable magnesium alloys: A review,” *J. Mater. Chem. B*, 2014, 2, 1912–1933.

Y. H. Seo and C. G. Kang, The Effect of Applied Pressure on Particle-dispersion Characteristics and Mechanical Properties in Melt-stirring Squeeze-cast SiCp/Al Composites, *J of Mater. Process. Tech.*, 1995, 55, 370–379.

Y. Jang, B. Collins, J. Sankar, Y. Yun, “Effect of biologically relevant ions on the corrosion products formed on alloy AZ31B: An improved understanding of magnesium corrosion,” *Acta Biomater.*, 2013, 9, 8761–8770.

Y. Li, M. Li, W. Hu, P. Hodgson, and C. Wen, “Biodegradable Mg-Ca and Mg-Ca-Y alloys for regenerative medicine,” *Mater. Sci. Forum*, 2010, 654-656.

Y. Song, D. Shan, R. Chen, F. Zhang, and E.-H. Han, “Biodegradable behaviors of AZ31 magnesium alloy in simulated body fluid,” *Mater. Sci. and Eng. C: Mater. for Bio. Appl.*, 2009, 29, 1039–1045.

Y. Sun, M. X. Kong, X. Jiao, “In-vitro evaluation of Mg-4.0Zn-0.2Ca alloy for biomedical application,” *T Nonferr Metal Soc.*, 2011, 21, 252-257.

Y. T. Cheng and C. M. Cheng, “What is Indentation Hardness?” *Surf. and Coat. Tech.*, 2000, 133, 417–424.

Y. Wan and J. Gong, “Influence of TiC Particle Size on the Load-independent Hardness of Al<sub>2</sub>O<sub>3</sub>-TiC Composites,” *Materials Letters*, 2003, 57, 3439-3443.

Y. Wan, G. Xiong, H. Luo, F. He, Y. Huang, X. Zhou, “Preparation and characterization of a new biomedical magnesium–calcium alloy,” *Mater. Des.* 2008, 29, 2034–2037.

Y. Wang, M. Wei, J. Gao, “Improve corrosion resistance of magnesium in simulated body fluid by dicalcium phosphate dihydrate coating,” *Mater. Sci. Eng. C.*, 2009, 29, 1311–1316.

Y. Xia, B. Zhang, Y. Wang, M. Qian, L. Geng, “In-vitro cytotoxicity and in-vivo biocompatibility of as-extruded Mg-4.0Zn-0.2Ca alloy,” *Mater. Sci. Eng. C.*, 2012, 32, 665–669.

Y.F. Zheng, X.H. Chen, J.A. Yang, et al., “Fundamental theory of biodegradable metals definition, criteria, and design,” *Adv. Funct. Mater.*, 2019, 29, 1805402.

Y.H. Seo and C. G.Kang, “The Effect of Applied Pressure on Particle-dispersion Characteristics and Mechanical Properties in Melt-stirring Squeeze-cast SiCp/Al Composites,” *J. of Mater. Proces. Tech.*, 1995, 55, 370–379.

Y.S. Kang, S.H. Kang, and D.J. Kim, “Effect of addition of Cr on the sintering of TiB<sub>2</sub> ceramics,” *J. Mater. Sci.*, 2005, 40, 4153–4155.

Z. Li, X. Gu, S. Lou, and Y. Zheng, “The development of binary Mg-Ca alloys for use as biodegradable materials within bone,” *Biomater.*, 2008, 29, 1329–1344.

Z. Liu, D. Qiu, F. Wang, J.A. Taylor, M. Zhang, “Effect of grain refinement on tensile properties of cast zinc alloys,” *Metall. and Mater. Trans. A*, 2016, 47, 830-841.

Z.G. Huan, M.A. Leeflang, J. Zhou, L.E. Fratila-Apachitei, and J. Duszczuk, “In vitro degradation behavior and cytocompatibility of Mg-Zn-Zr alloys,” *J. Mater. Sci. Mater. Med.*, 2010, 21, 2623–2635.

## List of Publications

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1. **Pooja Rai**, Amrendra Rai, Vijay Kumar, Raj Kumar Chaturvedi, Vinay Kumar Singh, *“Corrosion study of biodegradable magnesium based 1393 bioactive glass in simulated body fluid”*, Ceramics International, 45 (2019), 16893-16903.
2. **Pooja Rai**, Raj Kumar Chaturvedi, Apoorv Mishra, Vijay Kumar, Vinay Kumar Singh, *“To develop biodegradable Mg-based metal ceramic composites as bone implant material”* Bulletin of Material Science, 43 (2020), 227.