

REFERENCES

1. Akbarpour, M.R., Salahi, E., Hesari, F.A., Kim, H.S. and Simchi, A., 2013. Effect of nanoparticle content on the microstructural and mechanical properties of nano-SiC dispersed bulk ultrafine-grained Cu matrix composites. *Materials & Design* (1980-2015), 52, pp.881-887.
2. Akhtar, F., Askari, S.J., Shah, K.A., Du, X. and Guo, S., 2009. Microstructure, mechanical properties, electrical conductivity and wear behavior of high volume TiC reinforced Cu-matrix composites. *Materials characterization*, 60(4), pp.327-336.
3. Androulidakis, C., Tsoukleri, G., Koutroumanis, N., Gkikas, G., Pappas, P., Parthenios, J., Papagelis, K. and Galiotis, C., 2015. Experimentally derived axial stress–strain relations for two-dimensional materials such as monolayer graphene. *Carbon*, 81, pp.322-328.
4. Archard, J., 1953. Contact and rubbing of flat surfaces. *Journal of applied physics*, 24(8), pp.981-988.
5. Asthana, R., Kumar, A. and Dahotre, N.B., 2006. *Materials processing and manufacturing science*. Elsevier.
6. Aytimur, A., Koçyiğit, S. and Uslu, I., 2014. Calcia Stabilized Ceria Doped Zirconia Nanocrystalline Ceramic. *Journal of Inorganic and Organometallic Polymers and Materials*, 24(6), pp.927-932.
7. Bowden, F.P. and Leben, L., 1939. The nature of sliding and the analysis of friction. *Proceedings of the Royal Society of London. Series A. Mathematical and Physical Sciences*, 169(938), pp.371-391.
8. Bowden, F.P. and Tabor, D., 1954. *The friction and lubrication of solids*. Clarendon press.
9. Calizo, I., Balandin, A.A., Bao, W., Miao, F. and Lau, C.N., 2007. Temperature dependence of the Raman spectra of graphene and graphene multilayers. *Nano letters*, 7(9), pp.2645-2649.

10. Campbell, F.C., 2010. Structural composite materials. ASM international.
11. Chee, W.K., Lim, H.N., Zainal, Z., Huang, N.M., Harrison, I. and Andou, Y., 2016. Flexible graphene-based super capacitors: a review. *The Journal of Physical Chemistry C*, 120(8), pp.4153-4172.
12. Chen, B., Bi, Q., Yang, J., Xia, Y. and Hao, J., 2008. Tribological properties of solid lubricants (graphite, h-BN) for Cu-based P/M friction composites. *Tribology international*, 41(12), pp.1145-1152.
13. Chen, B., Yang, J., Zhang, Q., Huang, H., Li, H., Tang, H. and Li, C., 2015. Tribological properties of copper-based composites with copper coated NbSe₂ and CNT. *Materials & Design*, 75, pp.24-31.
14. Chen, F., Ying, J., Wang, Y., Du, S., Liu, Z. and Huang, Q., 2016. Effects of graphene content on the microstructure and properties of copper matrix composites. *Carbon*, 96, pp.836-842.
15. Chen, J., Cheng, J., Li, F., Zhu, S., Qiao, Z. and Yang, J., 2016. The effect of compositional tailoring and sintering temperature on the mechanical and tribological properties of Cu/AlMgB₁₄ composite. *Tribology International*, 96, pp.155-162.
16. Chen, J., Li, J., Xiong, D., He, Y., Ji, Y. and Qin, Y., 2016. Preparation and tribological behavior of Ni-graphene composite coating under room temperature. *Applied Surface Science*, 361, pp.49-56.
17. Chen, X., Tao, J., Liu, Y., Bao, R., Li, F., Li, C. and Yi, J., 2019. Interface interaction and synergistic strengthening behavior in pure copper matrix composites reinforced with functionalized carbon nanotube-graphene hybrids. *Carbon*, 146, pp.736-755.
18. Chen, X., Tao, J., Yi, J., Liu, Y., Li, C. and Bao, R., 2018. Strengthening behavior of carbon nanotube-graphene hybrids in copper matrix composites. *Materials Science and Engineering: A*, 718, pp.427-436.

19. Chen, Z., Yan, H., Guo, L., Feng, Y., Li, L., Feng, W., Yang, P., Liu, B., Liu, T. and Yuan, J., 2020. Investigation of mechanical and frictional performance for bismaleimide composites reinforced by hyperbranched polysiloxane-cyclophosphazene functionalized rGO/MoS₂. *Journal of Alloys and Compounds*, 823, p.153837.
20. Chen, Z., Yan, H., Liu, T., Niu, S. and Ma, J., 2015. Improved mechanical and tribological properties of bismaleimide composites by surface-functionalized reduced graphene oxide and MoS₂ coated with cyclotriphosphazene polymer. *RSC advances*, 5(118), pp.97883-97890.
21. Cheng, J., Gan, X., Chen, S., Lai, Y., Xiong, H. and Zhou, K., 2019. Properties and microstructure of copper/nickel-iron-coated graphite composites prepared by electroless plating and spark plasma sintering. *Powder technology*, 343, pp.705-713.
22. Choudhary, S., Mungse, H.P. and Khatri, O.P., 2013. Hydrothermal deoxygenation of graphene oxide: chemical and structural evolution. *Chemistry—An Asian Journal*, 8(9), pp.2070-2078.
23. Chouhan, A., Mungse, H.P., Sharma, O.P., Singh, R.K. and Khatri, O.P., 2018. Chemically functionalized graphene for lubricant applications: Microscopic and spectroscopic studies of contact interfaces to probe the role of graphene for enhanced tribo-performance. *Journal of colloid and interface science*, 513, pp.666-676.
24. Chu, K., Wang, J., Liu, Y.P. and Geng, Z.R., 2018. Graphene defect engineering for optimizing the interface and mechanical properties of graphene/copper composites. *Carbon*, 140, pp.112-123.
25. Chu, K., Wang, J., Liu, Y.P., Li, Y.B., Jia, C.C. and Zhang, H., 2019. Creating defects on graphene basal-plane toward interface optimization of graphene/CuCr composites. *Carbon*, 143, pp.85-96.
26. Costa, S.D., Weis, J.E., Frank, O., Bastl, Z. and Kalbac, M., 2015. Thermal treatment of fluorinated graphene: An in situ Raman spectroscopy study. *Carbon*, 84, pp.347-354.

27. Cui, Q., Chen, C., Yu, C., Lu, T., Long, H., Yan, S., Volinsky, A.A. and Hao, J., 2020. Effect of molybdenum particles on thermal and mechanical properties of graphite flake/copper composites. *Carbon*, 161, pp.169-180.
28. Dhokey, N.B. and Paretkar, R.K., 2008. Study of wear mechanisms in copper-based SiCp (20% by volume) reinforced composite. *Wear*, 265(1-2), pp.117-133.
29. Ding, S., Zhang, D., Chen, J.S. and Lou, X.W.D., 2012. Facile synthesis of hierarchical MoS₂ microspheres composed of few-layered nanosheets and their lithium storage properties. *Nanoscale*, 4(1), pp.95-98.
30. Eddine, W.Z., Matteazzi, P. and Celis, J.P., 2013. Mechanical and tribological behavior of nanostructured copper–alumina cermets obtained by pulsed electric current sintering. *Wear*, 297(1-2), pp.762-773.
31. Fathy, A., Shehata, F., Abdelhameed, M. and Elmahdy, M., 2012. Compressive and wear resistance of nanometric alumina reinforced copper matrix composites. *Materials & Design (1980-2015)*, 36, pp.100-107.
32. Furlan, K.P., de Mello, J.D.B. and Klein, A.N., 2018. Self-lubricating composites containing MoS₂: A review. *Tribology International*, 120, pp.280-298.
33. Gao, X., Yue, H., Guo, E., Zhang, H., Lin, X., Yao, L. and Wang, B., 2016. Mechanical properties and thermal conductivity of graphene reinforced copper matrix composites. *Powder Technology*, 301, pp.601-607.
34. Gao, X., Yue, H., Guo, E., Zhang, S., Yao, L., Lin, X., Wang, B. and Guan, E., 2018. Tribological properties of copper matrix composites reinforced with homogeneously dispersed graphene nanosheets. *Journal of materials science & technology*, 34(10), pp.1925-1931.
35. Garg, P., Park, S.J. and German, R.M., 2007. Effect of die compaction pressure on densification behavior of molybdenum powders. *International Journal of Refractory Metals and Hard Materials*, 25(1), pp.16-24.
36. Gautam, R.K., Ray, S., Jain, S.C. and Sharma, S.C., 2008. Tribological behavior of Cu–Cr–SiCp in situ composite. *Wear*, 265(5-6), pp.902-912.

37. Gautam, R.K.S., Rao, U.S., Mishra, S. and Tyagi, R., 2020. Tribological Behavior of Atmospheric Plasma-Spray-Deposited Ni-Based Composite Coatings at Different Speeds and Temperatures. *Journal of Thermal Spray Technology*, pp.1-17.
38. German, R.M., 2016. Sintering trajectories: description on how density, surface area, and grain size change. *Jom*, 68(3), pp.878-884.
39. Ghambari, M., Ebadzadeh, T., Pakseresht, A.H. and Ghasali, E., 2020. Preparation of Ag/reduced graphene oxide reinforced copper matrix composites through spark plasma sintering: An investigation of microstructure and mechanical properties. *Ceramics International*.
40. Guillon, O., Gonzalez-Julian, J., Dargatz, B., Kessel, T., Schierning, G., Räthel, J. and Herrmann, M., 2014. Field-assisted sintering technology/spark plasma sintering: mechanisms, materials, and technology developments. *Advanced Engineering Materials*, 16(7), pp.830-849.
41. Gunjishima, I., Akashi, T. and Goto, T., 2002. Characterization of directionally solidified B₄C-TiB₂ composites prepared by a floating zone method. *Materials Transactions*, 43(4), pp.712-720.
42. Guo, H., Xu, H., Bi, X. and Gong, S., 2002. Preparation of Al₂O₃-YSZ composite coating by EB-PVD. *Materials Science and Engineering: A*, 325(1-2), pp.389-393.
43. Guyot, P., Rat, V., Coudert, J.F., Jay, F., Maitre, A. and Pradeilles, N., 2012. Does the Branly effect occur in spark plasma sintering?. *Journal of Physics D: Applied Physics*, 45(9), p.092001.
44. Haghshenas, M., 2016. Metal-matrix composites. *Reference Module in Materials Science and Materials Engineering*, pp.03950-3.
45. Hajiyev, P., Cong, C., Qiu, C. and Yu, T., 2013. Contrast and Raman spectroscopy study of single-and few-layered charge density wave material: 2H-TaSe 2. *Scientific reports*, 3(1), pp.1-6.

46. Hardy, W.B., 1931. Problems of the boundary state. *Philosophical Transactions of the Royal Society of London. Series A, Containing Papers of a Mathematical or Physical Character*, 230(681-693), pp.1-37.
47. He, X., Zou, G., Xu, Y., Zhu, H., Jiang, H., Jiang, X., Xia, W., Chen, J., Wu, J. and Yang, S., 2018. Nano-mechanical and tribological properties of copper matrix composites reinforced by graphene nanosheets. *Progress in Natural Science: Materials International*, 28(4), pp.416-421.
48. Holmberg, K. and Erdemir, A., 2017. Influence of tribology on global energy consumption, costs and emissions. *Friction*, 5(3), pp.263-284.
49. Hong, E., Kaplin, B., You, T., Suh, M.S., Kim, Y.S. and Choe, H., 2011. Tribological properties of copper alloy-based composites reinforced with tungsten carbide particles. *Wear*, 270(9-10), pp.591-597.
50. Hu, L., Hu, W., Gottstein, G., Bogner, S., Hollad, S. and Bührig-Polaczek, A., 2012. Investigation into microstructure and mechanical properties of NiAl-Mo composites produced by directional solidification. *Materials Science and Engineering: A*, 539, pp.211-222.
51. Ji, Z., Zhang, L., Xie, G., Xu, W., Guo, D., Luo, J. and Prakash, B., 2020. Mechanical and tribological properties of nanocomposites incorporated with two-dimensional materials. *Friction*, pp.1-34.
52. Jiang, J.W., 2015. Graphene versus MoS₂: A short review. *Frontiers of Physics*, 10(3), pp.287-302.
53. Kato, H., Takama, M., Iwai, Y., Washida, K. and Sasaki, Y., 2003. Wear and mechanical properties of sintered copper–tin composites containing graphite or molybdenum disulfide. *Wear*, 255(1-6), pp.573-578.
54. Kováčik, J., Emmer, Š., Bielek, J. and Keleši, L.U., 2008. Effect of composition on friction coefficient of Cu–graphite composites. *Wear*, 265(3-4), pp.417-421.
55. Kovalchenko, A.M., Fushchich, O.I. and Danyluk, S., 2012. The tribological properties and mechanism of wear of Cu-based sintered powder materials

containing molybdenum disulfide and molybdenum diselenite under unlubricated sliding against copper. *Wear*, 290, pp.106-123.

56. Kumar, D.D., Kumar, N., Panda, K., Kirubakaran, A.K. and Kuppusami, P., 2018. Tribochemistry of contact interfaces of nanocrystalline molybdenum carbide films. *Applied Surface Science*, 447, pp.677-686.
57. Kumari, S., Gusain, R., Kumar, N. and Khatri, O.P., 2016. PEG-mediated hydrothermal synthesis of hierarchical microspheres of MoS₂ nanosheets and their potential for lubrication application. *Journal of Industrial and Engineering Chemistry*, 42, pp.87-94.
58. Li, G., Peng, N., Sun, D. and Sun, S., 2015. Friction and wear behavior of nano-Al₂O₃ particles reinforced copper matrix composites. *Journal of Tribology*, 137(1).
59. Li, J.F., Zhang, L., Xiao, J.K. and Zhou, K.C., 2015. Sliding wear behavior of copper-based composites reinforced with graphene nanosheets and graphite. *Transactions of Nonferrous Metals Society of China*, 25(10), pp.3354-3362.
60. Li, X., Yan, S., Chen, X., Hong, Q. and Wang, N., 2020. Microstructure and mechanical properties of graphene-reinforced copper matrix composites prepared by in-situ CVD, ball-milling, and spark plasma sintering. *Journal of Alloys and Compounds*, p.155182.
61. Li, Y., Zhao, J., Zeng, G., Guan, C. and He, X., 2004. Ni/Ni₃Al microlaminate composite produced by EB-PVD and the mechanical properties. *Materials Letters*, 58(10), pp.1629-1633.
62. Lian, W., Mai, Y., Wang, J., Zhang, L., Liu, C. and Jie, X., 2019. Fabrication of graphene oxide-Ti₃AlC₂ synergistically reinforced copper matrix composites with enhanced tribological performance. *Ceramics International*, 45(15), pp.18592-18598.
63. Liang, T., Sawyer, W.G., Perry, S.S., Sinnott, S.B. and Phillpot, S.R., 2011. Energetics of oxidation in MoS₂ nanoparticles by density functional theory. *The Journal of Physical Chemistry C*, 115(21), pp.10606-10616.

64. Lin, C.B., Chang, Z.C., Tung, Y.H. and Ko, Y.Y., 2011. Manufacturing and tribological properties of copper matrix/carbon nanotubes composites. *Wear*, 270(5-6), pp.382-394.
65. Lu, D., Qian, G., Feng, Y., Zhao, H., Zhou, Z. and Zhang, X., 2020. Tribological behaviors of Cu/RGO/WS₂ composites in air and vacuum environments. *Tribology Transactions*, pp.1-13.
66. Lu, Z.C., Zeng, M.Q., Xing, J.Q. and Zhu, M., 2016. Improving wear performance of CuSn5Bi5 alloys through forming self-organized graphene/Bi nanocomposite tribolayer. *Wear*, 364, pp.122-129.
67. Luo, H., Sui, Y., Qi, J., Meng, Q., Wei, F. and He, Y., 2017. Mechanical enhancement of copper matrix composites with homogeneously dispersed graphene modified by silver nanoparticles. *Journal of Alloys and Compounds*, 729, pp.293-302.
68. Mallikarjuna, H.M., Ramesh, C.S., Koppad, P.G., Keshavamurthy, R. and Sethuram, D., 2017. Nanoindentation and wear behaviour of copper based hybrid composites reinforced with SiC and MWCNTs synthesized by spark plasma sintering. *Vacuum*, 145, pp.320-333.
69. Martínez, M.S., Becerril, E.B., Ruiz, J.L. and Cuevas, A.C., 2018. *Metal Matrix Composites: Wetting and Infiltration*. Springer.
70. Moazami-Goudarzi, M. and Nemati, A., 2018. Tribological behavior of self-lubricating Cu/MoS₂ composites fabricated by powder metallurgy. *Transactions of Nonferrous Metals Society of China*, 28(5), pp.946-956.
71. Mohan, V.B., Lau, K.T., Hui, D. and Bhattacharyya, D., 2018. Graphene-based materials and their composites: A review on production, applications and product limitations. *Composites Part B: Engineering*, 142, pp.200-220.
72. Moustafa, S.F., El-Badry, S.A., Sanad, A.M. and Kieback, B., 2002. Friction and wear of copper-graphite composites made with Cu-coated and uncoated graphite powders. *Wear*, 253(7-8), pp.699-710.

73. Pellizzari, M. and Cipolloni, G., 2017. Tribological behaviour of Cu based materials produced by mechanical milling/alloying and spark plasma sintering. *Wear*, 376, pp.958-967.
74. Peng, H.X., Fan, Z. and Wang, D.Z., 2000. In situ Al₃Ti-Al₂O₃ intermetallic matrix composite: synthesis, microstructure, and compressive behavior. *Journal of Materials Research*, 15(9), pp.1943-1949.
75. Peng, L., 2007. Fabrication and properties of Ti₃AlC₂ particulates reinforced copper composites. *Scripta materialia*, 56(9), pp.729-732.
76. Pratik, A., Biswal, S.K. and Haridoss, P., 2020. Impact of enhanced interfacial strength on physical, mechanical and tribological properties of copper/reduced graphene oxide composites: Microstructural investigation. *Ceramics International*.
77. Rajan, T.P.D., Pillai, R.M., Pai, B.C., Satyanarayana, K.G. and Rohatgi, P.K., 2007. Fabrication and characterisation of Al-7Si-0.35 Mg/fly ash metal matrix composites processed by different stir casting routes. *Composites Science and Technology*, 67(15-16), pp.3369-3377.
78. Rajkovic, V., Bozic, D., Devecerski, A. and Jovanovic, M.T., 2012. Characteristic of copper matrix simultaneously reinforced with nano-and micro-sized Al₂O₃ particles. *Materials characterization*, 67, pp.129-137.
79. Rajkumar, K. and Aravindan, S., 2011. Tribological performance of microwave sintered copper-TiC-graphite hybrid composites. *Tribology international*, 44(4), pp.347-358.
80. Rajkumar, K. and Aravindan, S., 2011. Tribological studies on microwave sintered copper-carbon nanotube composites. *Wear*, 270(9-10), pp.613-621.
81. Rajkumar, K. and Aravindan, S., 2013. Tribological behavior of microwave processed copper-nanographite composites. *Tribology international*, 57, pp.282-296.

82. Rosso, M., 2006. Ceramic and metal matrix composites: Routes and properties. *Journal of materials processing technology*, 175(1-3), pp.364-375.
83. Sadoun, A.M., Fathy, A., Abu-Oqail, A., Elmetwaly, H.T. and Wagih, A., 2020. Structural, mechanical and tribological properties of Cu–ZrO₂/GNPs hybrid nanocomposites. *Ceramics International*, 46(6), pp.7586-7594.
84. Salvo, C., Mangalaraja, R.V., Udayabashkar, R., Lopez, M. and Aguilar, C., 2019. Enhanced mechanical and electrical properties of novel graphene reinforced copper matrix composites. *Journal of Alloys and Compounds*, 777, pp.309-316.
85. Samal, C.P., Parihar, J.S. and Chaira, D., 2013. The effect of milling and sintering techniques on mechanical properties of Cu–graphite metal matrix composite prepared by powder metallurgy route. *Journal of alloys and compounds*, 569, pp.95-101.
86. Shi, G., Wang, Z., Liang, J. and Wu, Z., 2011. NiCoCrAl/YSZ laminate composites fabricated by EB-PVD. *Materials Science and Engineering: A*, 529, pp.113-118.
87. Si, X., Li, M., Chen, F., Eklund, P., Xue, J., Huang, F., Du, S. and Huang, Q., 2017. Effect of carbide interlayers on the microstructure and properties of graphene-nanoplatelet-reinforced copper matrix composites. *Materials Science and Engineering: A*, 708, pp.311-318.
88. Singla, A., Garg, R. and Saxena, M., 2015. Microstructure and wear behavior of Al–Al₂O₃ in situ composites fabricated by the reaction of V₂O₅ particles in pure aluminum. *Green Processing and Synthesis*, 4(6), pp.487-497.
89. Srivatsan, T.S. and Lewandowski, J., 2006. Metal matrix composites: types, reinforcement, processing, properties and applications. *Materials Engineering-New york-*, 32, p.275.
90. Sui, B., Zeng, J.M., Chen, P., Gan, W.K. and Lu, J.B., 2014. Fabrication of Al₂O₃ Particle Reinforced Aluminum Matrix Composite by In Situ Chemical Reaction. In *Advanced Materials Research (Vol. 915, pp. 788-791)*. Trans Tech Publications Ltd.

91. Sun, Q., Wang, Z., Yu, Y., Yang, J., Tan, H. and Qiao, Z., 2019. Sialon tailoring copper-based composite to achieve high strength, high strain integrated with excellent wear resistance. *Tribology International*, 137, pp.127-138.
92. Tu, J.P., Rong, W., Guo, S.Y. and Yang, Y.Z., 2003. Dry sliding wear behavior of in situ Cu–TiB₂ nanocomposites against medium carbon steel. *Wear*, 255(7-12), pp.832-835.
93. Tu, J.P., Yang, Y.Z., Wang, L.Y., Ma, X.C. and Zhang, X.B., 2001. Tribological properties of carbon-nanotube-reinforced copper composites. *Tribology Letters*, 10(4), pp.225-228.
94. Tyagi, R., Xiong, D. and Li, J., 2011. Effect of load and sliding speed on friction and wear behavior of silver/h-BN containing Ni-base P/M composites. *Wear*, 270(7-8), pp.423-430.
95. Wang, H., Zhang, Z.H., Hu, Z.Y., Song, Q., Yin, S.P., Kang, Z. and Li, S.L., 2018. Improvement of interfacial interaction and mechanical properties in copper matrix composites reinforced with copper coated carbon nanotubes. *Materials Science and Engineering: A*, 715, pp.163-173.
96. Wang, Y., Gao, Y., Li, Y., Li, M., Sun, L., Zhai, W. and Li, K., 2020. Research on synergistic lubrication effect of silver modified Cu–Ni-graphite composite. *Wear*, 444, p.203140.
97. Xian, Y., Zou, Z., Tu, C., Ding, Y., Liao, T., Zhang, F., Luo, Q., Wu, G. and Gao, G., 2020. Identifying the effects of cobalt addition in copper-graphene nanoplatelet composites towards improved tribological performance. *Journal of Alloys and Compounds*, p.155444.
98. Xiao, J.K., Zhang, W. and Zhang, C., 2018. Microstructure evolution and tribological performance of Cu-WS₂ self-lubricating composites. *Wear*, 412, pp.109-119.
99. Xiao, J.K., Zhang, W., Liu, L.M., Zhang, L. and Zhang, C., 2017. Tribological behavior of copper-molybdenum disulfide composites. *Wear*, 384, pp.61-71.

100. Xiao-Ming, H., Fei, G., Lin-Lin, S., Rong, F. and En, Z., 2017. Effect of graphite content on the tribological performance of copper-matrix composites under different friction speeds. *Journal of Tribology*, 139(4).
101. Xu, Z., Zhang, X., Zhao, N. and He, C., 2020. Synergistic strengthening effect of in-situ synthesized WC_{1-x} nanoparticles and graphene nanosheets in copper matrix composites. *Composites Part A: Applied Science and Manufacturing*, p.105891.
102. Xue, M.Q., Liu, D.Q. and Han, K.Q., 2019. Synthesis and tribological performance of Cu-based composites with MoSe₂/MoO_x (x= 2, 3). *Chalcogenide Letters*, 16(9), pp.425-431.
103. Yang, K., Chen, Y., Pan, F., Wang, S., Ma, Y. and Liu, Q., 2016. Buckling behavior of substrate supported graphene sheets. *Materials*, 9(1), p.32.
104. Yi, J., Li, M.L., Zhou, H.X., Rosenkranz, A., Wang, B., Song, H. and Jiang, N., 2020. Enhanced tribological properties of Y/MoS₂ composite coatings prepared by chemical vapor deposition. *Ceramics International*.
105. Yin, L., Xiaonan, F., Mingxu, Z. and Xiaoying, Q., 2005. Chemical reaction of in-situ processing of NiAl/Al₂O₃ composite by using thermite reaction. *Journal of Wuhan University of Technology-Mater. Sci. Ed.*, 20(4), pp.90-92.
106. Yoon, D., Son, Y.W. and Cheong, H., 2011. Negative thermal expansion coefficient of graphene measured by Raman spectroscopy. *Nano letters*, 11(8), pp.3227-3231.
107. Yue, H., Yao, L., Gao, X., Zhang, S., Guo, E., Zhang, H., Lin, X. and Wang, B., 2017. Effect of ball-milling and graphene contents on the mechanical properties and fracture mechanisms of graphene nanosheets reinforced copper matrix composites. *Journal of Alloys and Compounds*, 691, pp.755-762.
108. Yu-nan, T., Zhi-he, D., Li-ping, N. and Ting-an, Z., 2019. Research on the Properties of Boron Carbide Particle-Reinforced Copper-Matrix/Graphite Self-Lubricating Composite Materials. *Russian Journal of Non-Ferrous Metals*, 60(3), pp.319-327.

109. Zhan, Y. and Zhang, G., 2004. Friction and wear behavior of copper matrix composites reinforced with SiC and graphite particles. *Tribology Letters*, 17(1), pp.91-98.
110. Zhang, D. and Zhan, Z., 2016. Strengthening effect of graphene derivatives in copper matrix composites. *Journal of Alloys and Compounds*, 654, pp.226-233.
111. Zhang, D., Wu, Y.C., Yang, M., Liu, X., Coileáin, C.Ó., Xu, H., Abid, M., Abid, M., Wang, J.J., Shvets, I.V. and Liu, H., 2016. Probing thermal expansion coefficients of monolayers using surface enhanced Raman scattering. *RSC advances*, 6(101), pp.99053-99059.
112. Zhang, F., Li, C., Yan, S., He, J., Liu, B. and Yin, F., 2019. Microstructure and tribological properties of plasma sprayed TiCN-Mo based composite coatings. *Applied Surface Science*, 464, pp.88-98.
113. Zhang, G., Hu, L., Hu, W., Gottstein, G., Bogner, S. and Bührig-Polaczek, A., 2012. Mechanical properties of NiAl-Mo composites produced by specially controlled directional solidification. *MRS Online Proceedings Library Archive*, 1516, pp.255-260.
114. Zhang, H., Springer, H., Aparicio-Fernández, R. and Raabe, D., 2016. Improving the mechanical properties of Fe-TiB₂ high modulus steels through controlled solidification processes. *Acta Materialia*, 118, pp.187-195.
115. Zhang, H., Zhu, H., Huang, J., Li, J. and Xie, Z., 2018. In-situ TiB₂-NiAl composites synthesized by arc melting: Chemical reaction, microstructure and mechanical strength. *Materials Science and Engineering: A*, 719, pp.140-146.
116. Zhang, K., Shao, G., Chen, X., Li, W., Ma, F. and Liu, P., 2019. Study of mechanical properties of graphene nanoplates reinforced copper matrix composites prepared through electrostatic self-assembly and electroless copper plating. *Materials Letters*, 252, pp.338-341.
117. Zhang, L., Bao, R., Yi, J., Guo, S., Tao, J., Li, C., Fang, D., Liu, Y. and Li, F., 2020. Improving comprehensive performance of copper matrix composite by

- spray pyrolysis fabricated CNT/W reinforcement. *Journal of Alloys and Compounds*, p.154940.
118. Zhang, S., Dong, J., Chen, L., Li, J. and Li, C., 2017. Fabrication of reduced graphene oxide/molybdenum disulfide heterostructures with enhanced friction and wear performances used in vacuum environment. *Digest journal of nanomaterials and biostructures*, 12(3), pp.765-773.
 119. Zhang, X., Dong, P., Chen, Y., Yang, W., Zhan, Y., Wu, K. and Chao, Y., 2016. Fabrication and tribological properties of copper matrix composite with short carbon fiber/reduced graphene oxide filler. *Tribology International*, 103, pp.406-411.
 120. Zhang, X., Yang, W., Zhang, J., Ge, X., Liu, X. and Zhan, Y., 2019. Multiscale graphene/carbon fiber reinforced copper matrix hybrid composites: Microstructure and properties. *Materials Science and Engineering: A*, 743, pp.512-519.
 121. Zhu, L., Yi, M., Wang, L. and Chen, S., 2020. Effects of foam copper on the mechanical properties and tribological properties of graphite/copper composites. *Tribology International*, p.106164.
 122. Zou, C., Chen, Z., Kang, H., Wang, W., Li, R., Li, T. and Wang, T., 2017. Study of enhanced dry sliding wear behavior and mechanical properties of Cu-TiB₂ composites fabricated by in situ casting process. *Wear*, 392, pp.118-125.