



City Research Online

City St George's, University of London

Citation: Nasir Bashir, M., Saad, H. M., Rizwan, M., Bingöl, S., Channa, I. A., Gul, M., Haseeb, A. S. M. A. & Naher, S. (2022). Effect of cobalt nanoparticles on mechanical properties of Sn–58Bi solder joint. *Journal of Materials Science: Materials in Electronics*, 33(28), pp. 22573-22579. doi: 10.1007/s10854-022-09035-6

This is the accepted version of the paper.

This version of the publication may differ from the final published version. To cite this item please consult the publisher's version.

Permanent repository link: <https://openaccess.city.ac.uk/id/eprint/31388/>

Link to published version: <https://doi.org/10.1007/s10854-022-09035-6>

Copyright and Reuse: Copyright and Moral Rights remain with the author(s) and/or copyright holders. Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge, unless otherwise indicated, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way. For full details of reuse please refer to [City Research Online policy](#).

Figures:

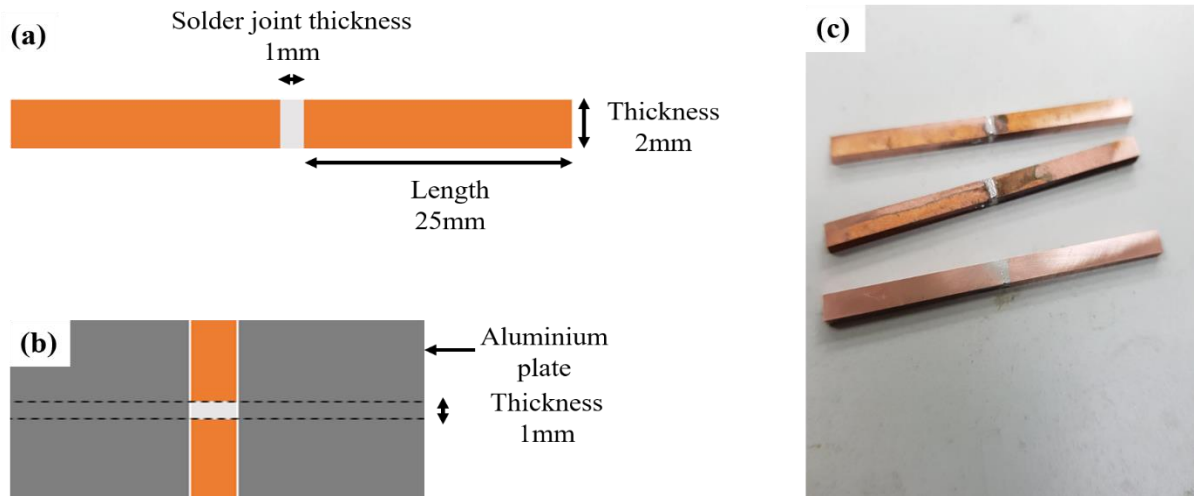


Figure 2 Experimental procedure for the preparation of Sn-58Bi-xCo tensile samples

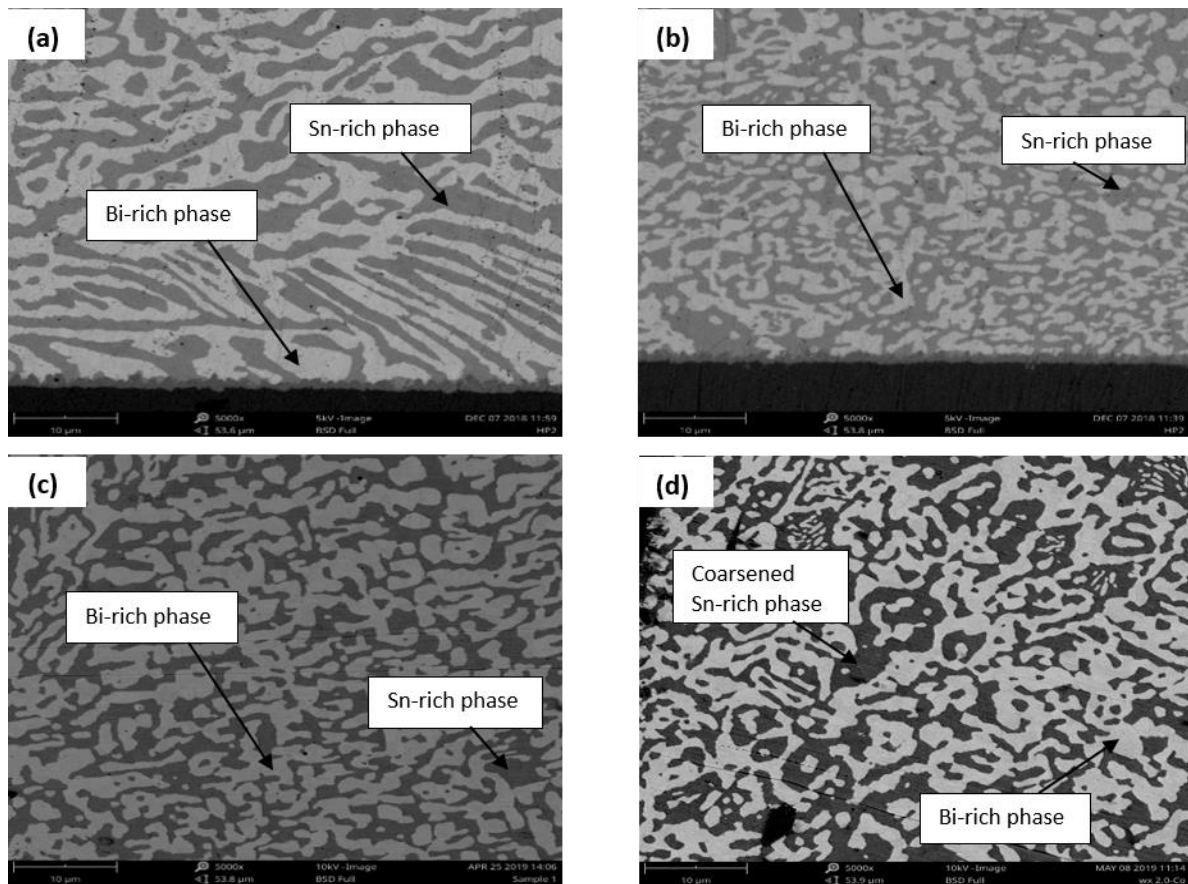


Figure 1 SEM images of (a) Sn-58Bi, (b) Sn-58Bi-0.5Co, (c) Sn-58Bi-1Co, (d) Sn-58Bi-2Co, respectively.

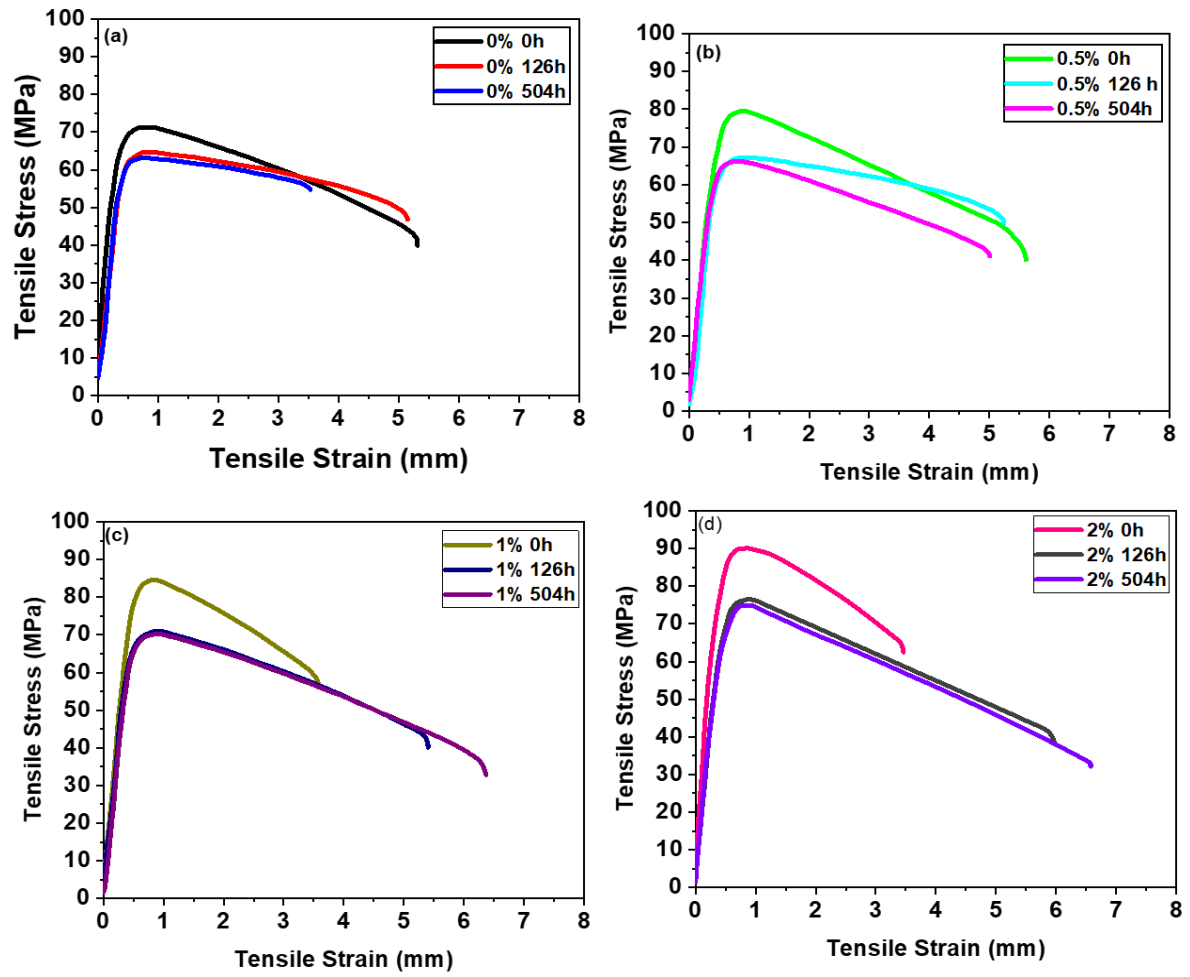


Figure 3 Tensile stress-strain curves of different cobalt concentrations

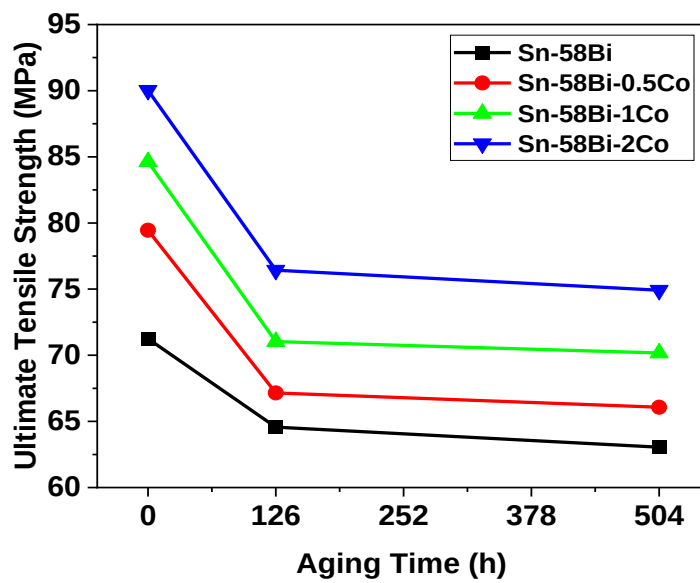


Figure 4 Ultimate tensile strength at different aging time