

City Research Online

City, University of London Institutional Repository

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.

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: City Research Online aims to make research outputs of City, University of London available to a wider audience. Copyright and Moral Rights remain with the author(s) and/or copyright holders. URLs from City Research Online may be freely distributed and linked to.

Reuse: Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. 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. City Research Online: <u>http://openaccess.city.ac.uk/</u><u>publications@city.ac.uk</u>

Percentage of Cobalt (%)	Reaction Time (hours)	Tensile Stress (MPa)
0	0	71.25
	126	64.56
	504	63.04
0.5	0	79.45
	126	67.15
	504	66.07
1	0	84.63
	126	71.03
	504	70.17
2	0	90.02
	126	76.43
	504	74.92

 Table 1 Maximum Tensile Strength at different cobalt concentrations

Table 2 Ultimate Tensile Strength at different concentrations of cobalt
--

Percentage of Cobalt (%)	Ultimate Tensile Strength (MPa)
0	71.25
0.5	79.45
1	84.63
2	90.02