

The article Materials-637944 "Fabrication and tribological properties of mesocarbon microbead-Cu friction composites" by Hai-Xia Guo and Jian-Feng Yang represents decent scientific level. In my opinion it is an interesting work concerning the tribological behaviour of copper based composites with addition of graphite flakes (GrF) and mesocarbon microbeads (MCMB) serving as solid lubricants. The emphasis of the research was placed on enhanced creation of cementite phase in presence of MCMB and its influence on mechanical properties of produced composites. Although, I found some major issues, that do not let me accept it for publication in the current shape. All of the aspects requiring explanations or corrections are listed below.

The entire manuscript has some major grammar and style mistakes. In addition, several sentences are way too long and many phrases are repeated in consecutive sentences, making them hard to read and understand. English of the whole paper will require significant revision. Authors should take the help of some reliable professional agency to proofread their manuscript or of a native English speaker with some technical knowledge of the subject. The appropriate changes should be done.

Authors are asked to write in colour any technical and language improvement made in their revised text.

Additionally, some essential issues that should be addressed are listed below.

- a) The output powders used in the presented work lack some basic information: purity, producer designation, morphology.
- b) Why both the aluminium and alumina powders used in this study had such a different mean particle size compared to copper, iron and GrF/MCMB?
- c) Based on presented SEM images (Fig.1 a and c) and particle size of alumina, it is impossible to state if it is uniformly distributed within the matrix. Used magnification does not allow to conclude on possible voids/microcracks presence too. In addition, images in BSEM mode (Fig.1 b and d) are impossible to read. Higher quality SEM images should be attached with visible markers pointing out different phases.
- d) There are no comments for Si peaks on XRD pattern. There is also no diffraction analysis made from composite to prove the presence of additional phases.
- e) Authors conclude that there is formation of uniform and compact tribofilm, although there is no evidence of it in the study, except for reduced wear rate which is an outcome of cementite presence.
- f) There is lack of consistency in the described results, Authors use individual analysis to confirm their thesis.