

Heat treatment of selective laser melted Ti6Al4V alloy: microstructure and mechanical properties

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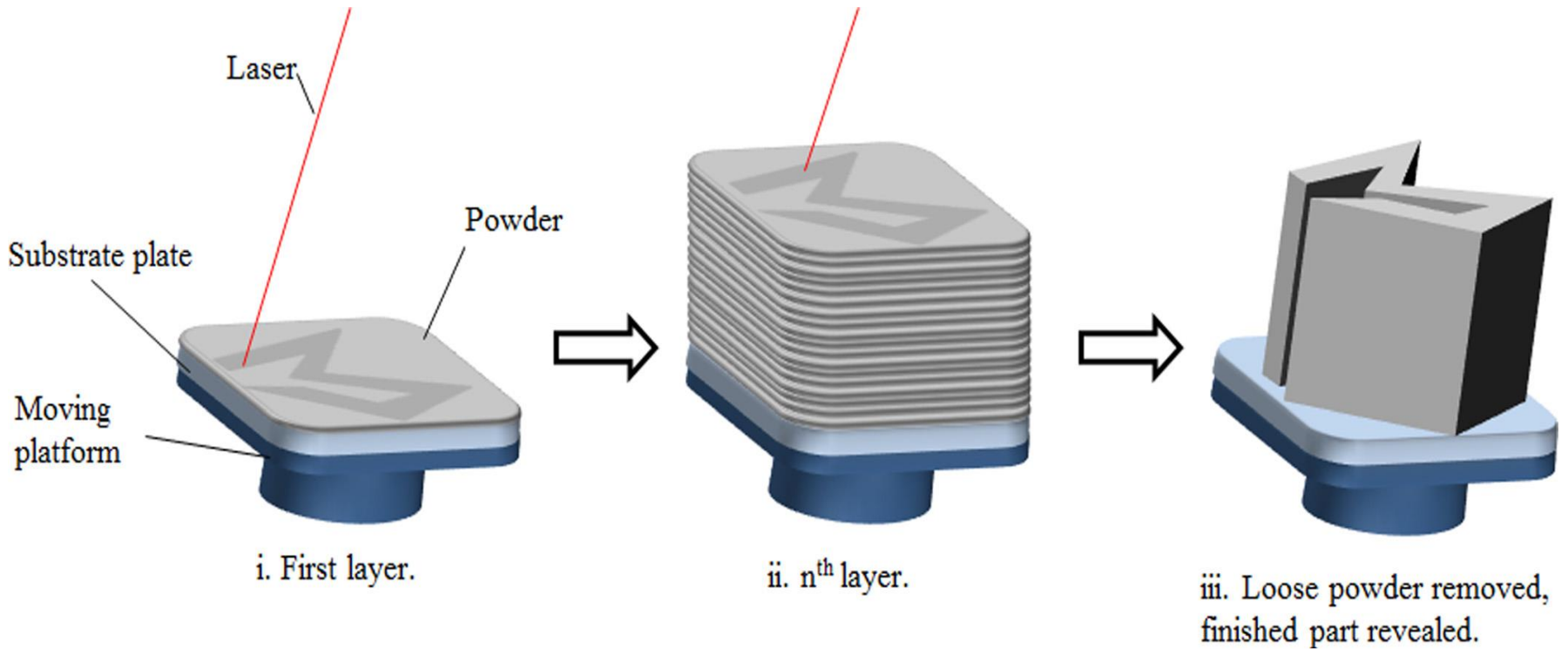
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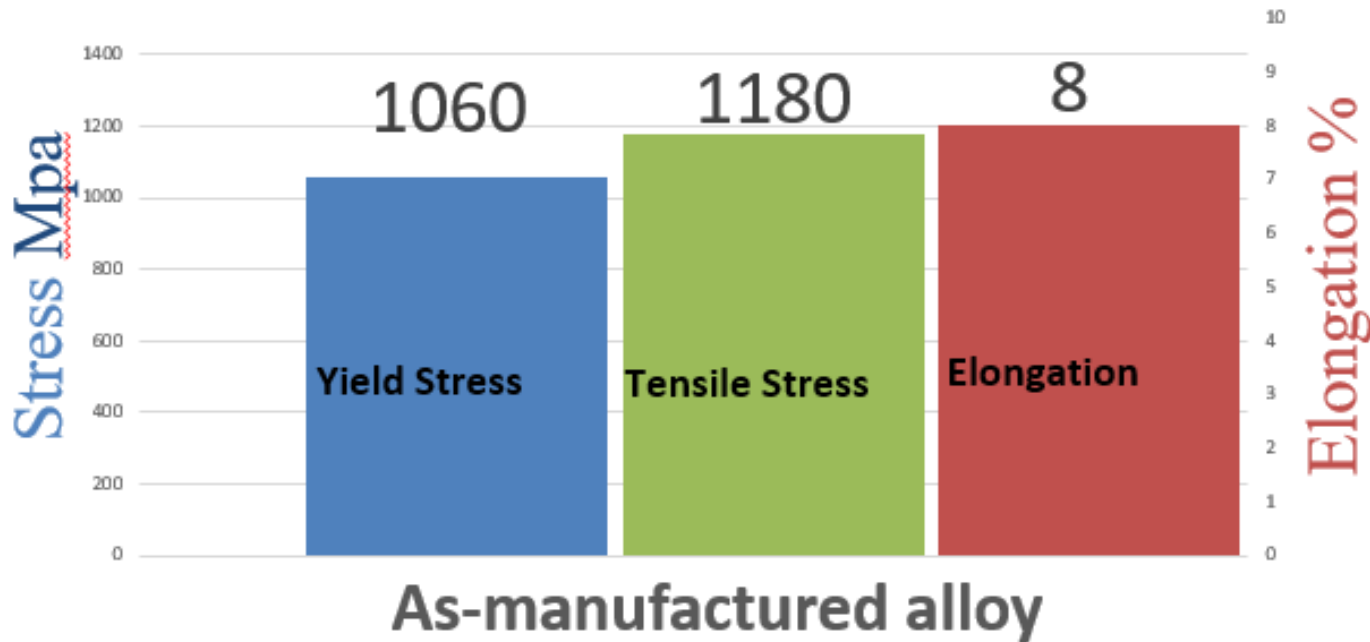
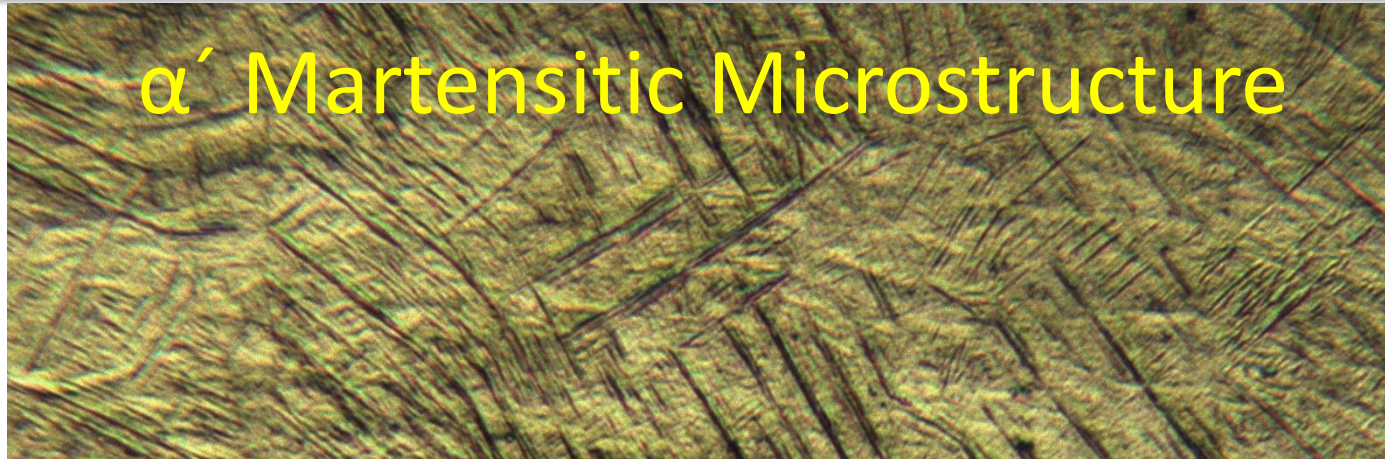


Introduction

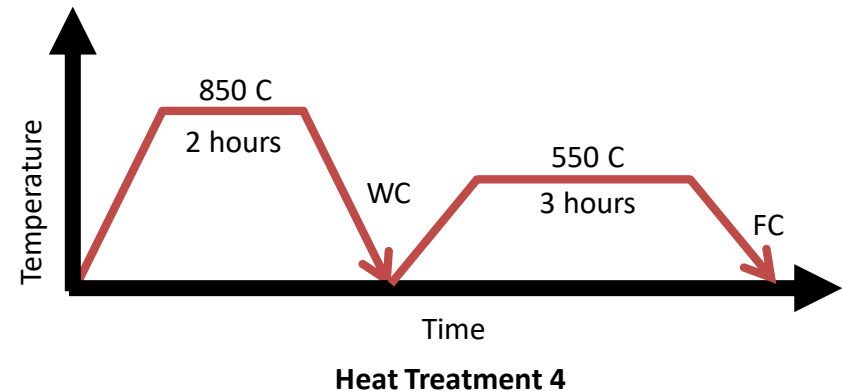
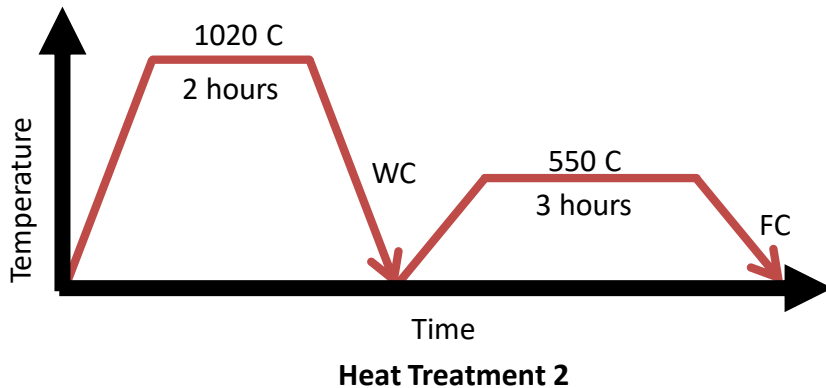
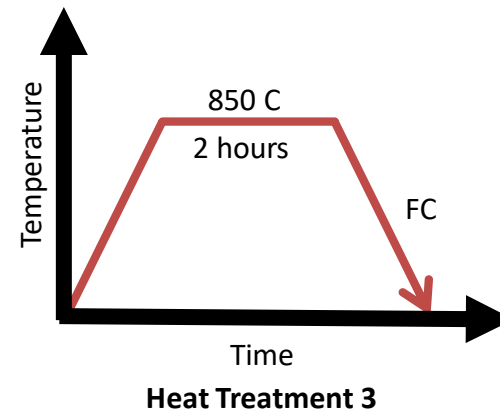
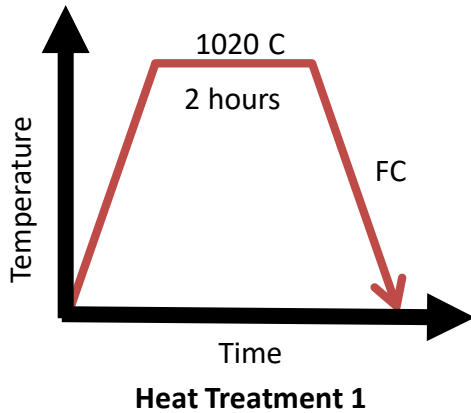
Selective Laser Melting



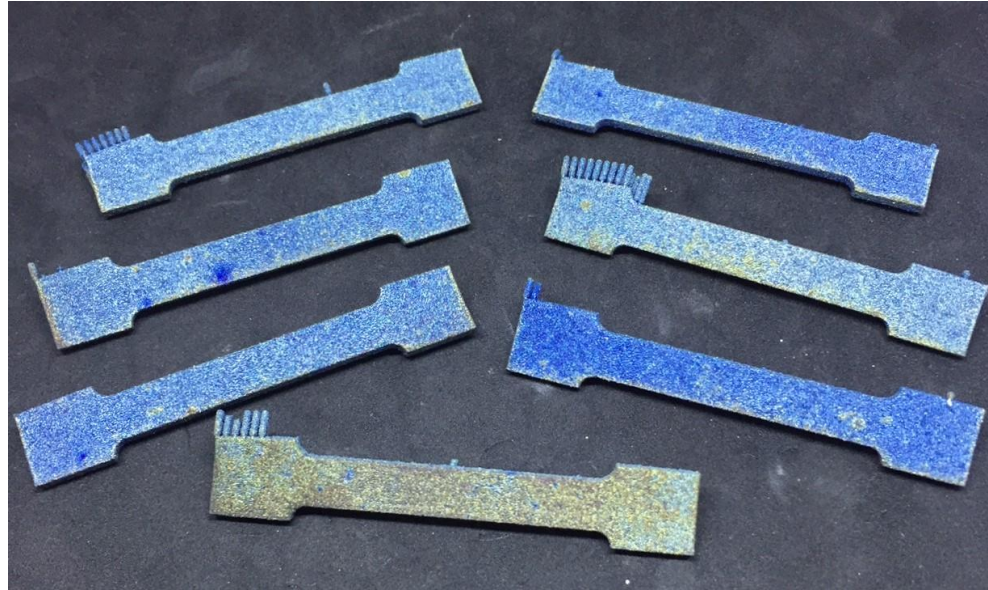
Problems and The goal of this study



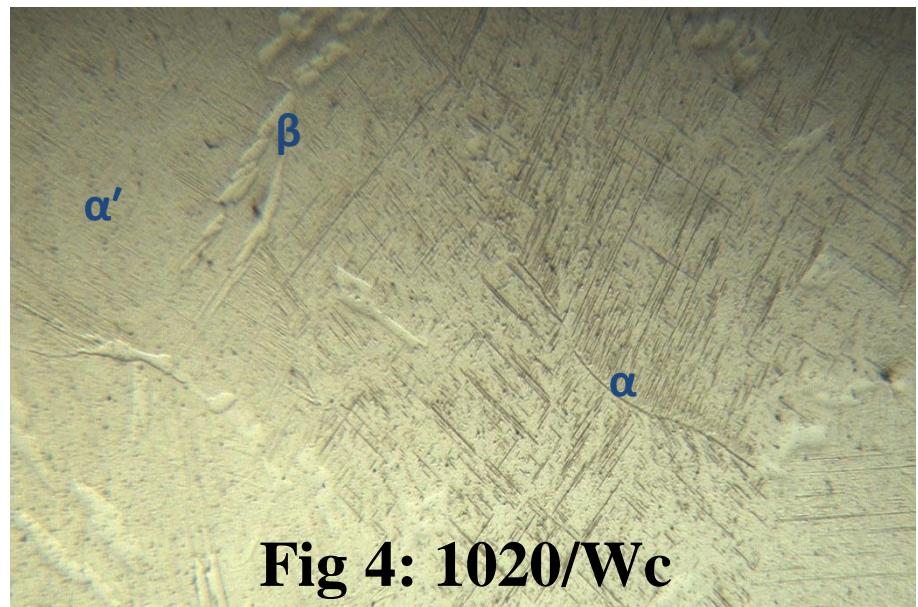
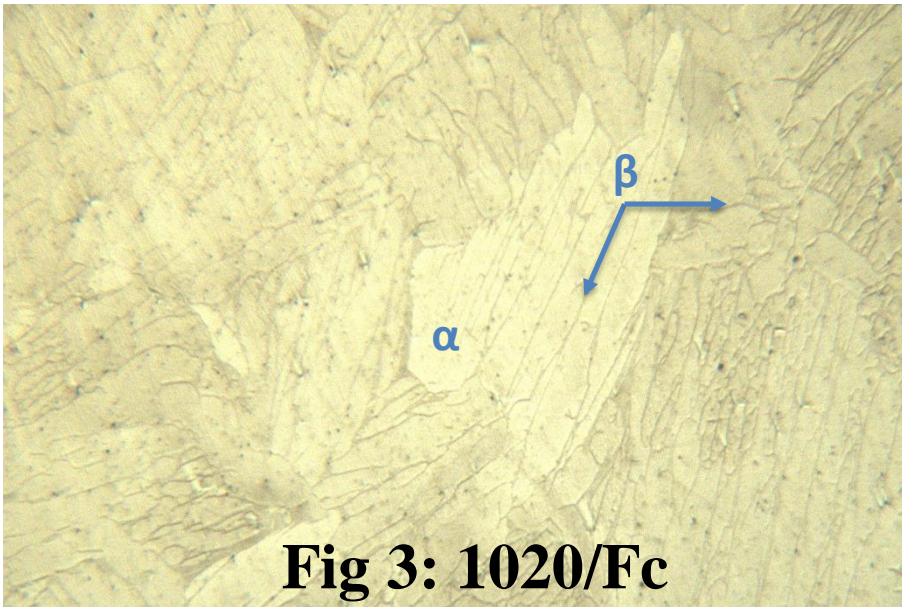
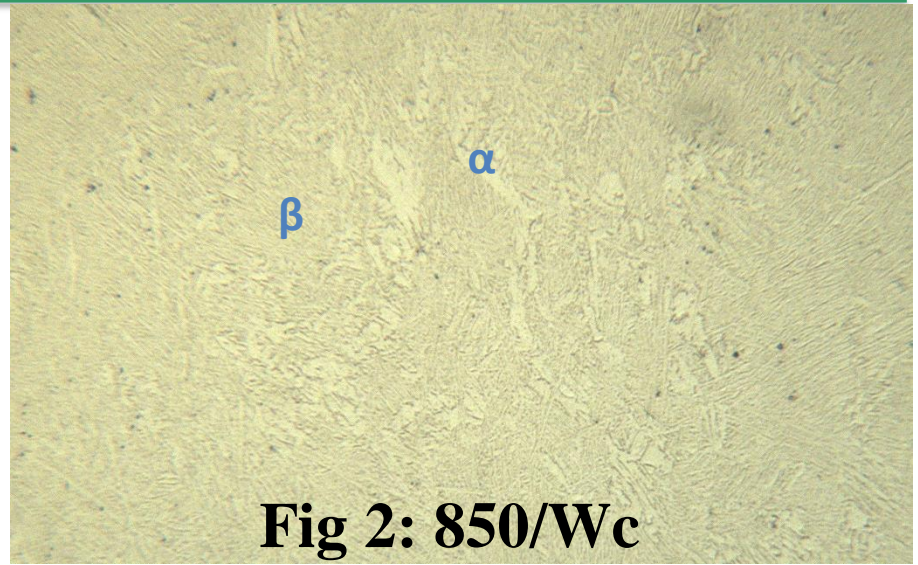
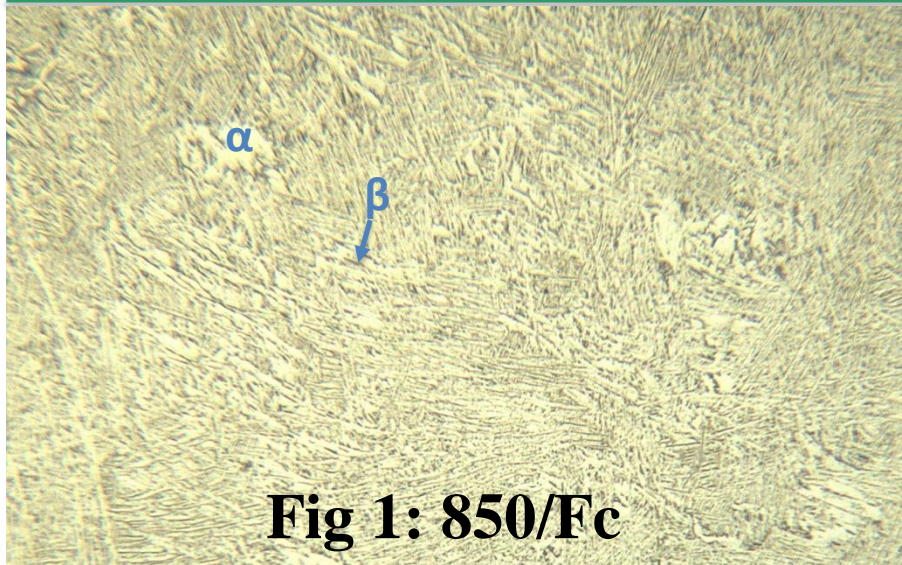
Experimental Work



Samples



Results: Microstructure



Results: Mechanical Properties



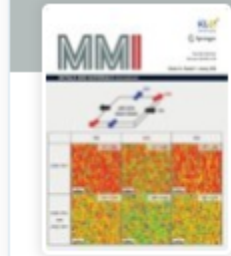
Selective laser melting of *Ti6Al4V/hydroxyapatite* composites:

Phase transformations and mechanical properties

Publications

- 1) Selective laser melting of Ti alloys and hydroxyapatite for tissue engineering: progress and challenges
<https://doi.org/10.1088/2053-1591/ab1dee>
- 2) Preparation and Synthesis of Hydroxyapatite Bio-Ceramic from Bovine bone by Thermal Heat Treatment
<https://doi.org/10.14382/epitoanyag-jsbcm.2019.18>
- 3) Dissimilar Resistance Spot Welding of Ferrite-Martensite Dual Phase Steel/Low Carbon Steel: Phase Transformations and Mechanical Properties
https://doi.org/10.1007/978-3-319-75677-6_60
- 4) The effect of nano-quenching media on the tensile properties and microstructure of medium carbon steel
http://www.ejmse.tuiasi.ro/articles/EJMSE_4_2_6_Jaber.pdf
- 5) Similar and Dissimilar Resistance Spot Welds of DP600 and X8Cr17 steels sheets: Welding Current and Fracture Toughness
<http://bk.bgk.uni-obuda.hu/index.php/BK/article/view/35>

Investigating the impact of a selective laser melting process on Ti6Al4V alloy hybrid powders with spherical and irregular shapes



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Thank you very much for your attention