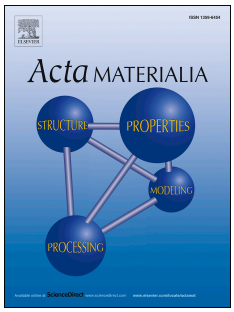
Accepted Manuscript



Multicomponent γ'-strengthened Co-based superalloys with increased solvus temperatures and reduced mass densities

Eric A. Lass, Daniel J. Sauza, David C. Dunand, David N. Seidman

PII: S1359-6454(18)30065-X

DOI: 10.1016/j.actamat.2018.01.034

Reference: AM 14328

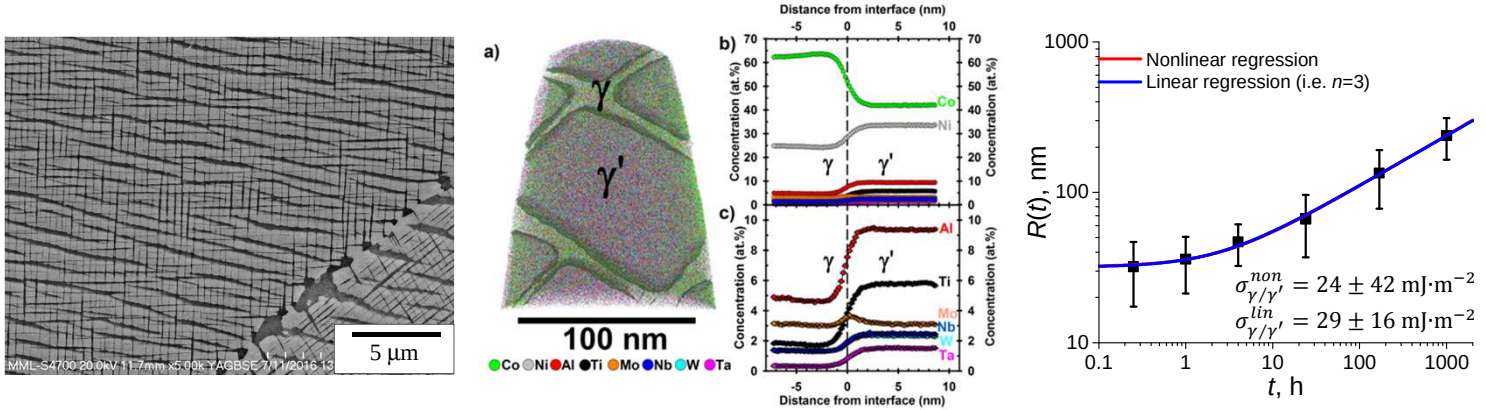
To appear in: *Acta Materialia*

Received Date: 12 December 2017

Revised Date: 4 January 2018

Accepted Date: 14 January 2018

Please cite this article as: E.A. Lass, D.J. Sauza, D.C. Dunand, D.N. Seidman, Multicomponent γ'-strengthened Co-based superalloys with increased solvus temperatures and reduced mass densities, *Acta Materialia* (2018), doi: 10.1016/j.actamat.2018.01.034.


5 µm
MML-S4700 20.0kV 11.7mm x5.00k YAGBSE 7/11/2016 13
a)
γ
γ'
100 nm
Co Ni Al Ti Mo Nb W Ta
b)
c)
Distance from interface (nm)
Concentration (at.%)
Co
Ni
Al
Ti
Mo
Nb
W
Ta
Nonlinear regression
Linear regression (i.e. n=3)
R(t), nm
t, h
$\sigma_{\gamma/\gamma'}^{non} = 24 \pm 42$ mJ·m^{-2}
$\sigma_{\gamma/\gamma'}^{lin} = 29 \pm 16$ mJ·m^{-2}