

# Accepted Manuscript

Effect of Zr on the microstructure, recrystallization behavior, mechanical properties and electrical conductivity of the novel Al-Er-Y alloy

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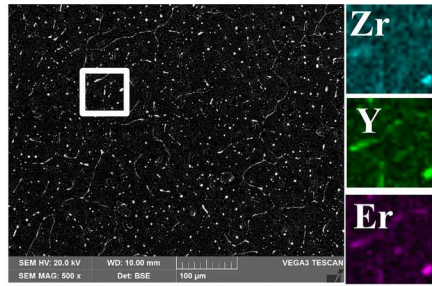
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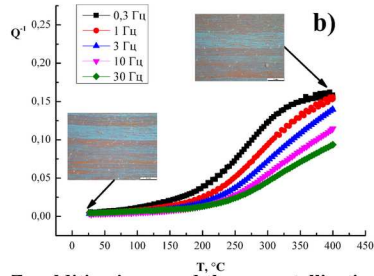
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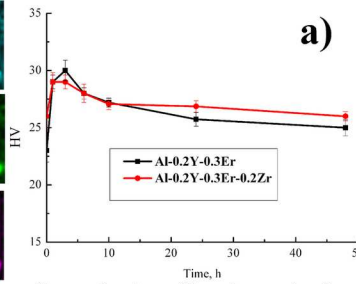
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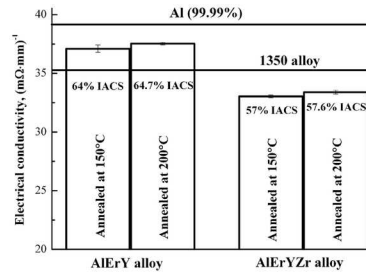
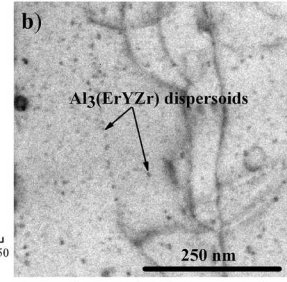
$\text{Al}_3(\text{ErYZr})$  eutectic phase in the AlErYZr



Zr addition increased the recrystallization temperature of the AlErY alloy higher than 400  $^\circ\text{C}$ .



Strengthening effect due to the formation of nanosized dispersoids



Good electrical conductivity

High tensile properties:

YS=121MPa, UTS=131MPa,  
EL.=12% for AlErY alloy

and

YS=140MPa, UTS=153MPa,  
EL.=12.2% for AlErYZr alloy

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