# Martensitic transitions in off-stoichiometric Ni-Mn-Sn alloys revisited

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**Abstract**

The martensitic transition in $Ni_2Mn_{1+x}Sn_{1-x}$ alloys is found to take place for off-stoichiometric compositions with x > 0.36. The absence of a transition at the parent composition in this system of compounds has always remained a puzzle. Recently we have shown [1] that ab-initio density functional theory calculations are able to capture the experimental trend in compositions at which this transition takes place. This allows us to discuss the microscopic considerations that lead to the existence of a transition and understand it in the same framework used for other systems which exhibit a transition for the parent compound.

[1] S. Pal, S. Sarkar, S. Pandey, C. Maji and P. Mahadevan, Phys. Rev. B 94, 115143 (2016).