

# Monika Krugla

Industrial PhD student (research project in collaboration with Tata Steel)



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Research interests:

Phase transformations.

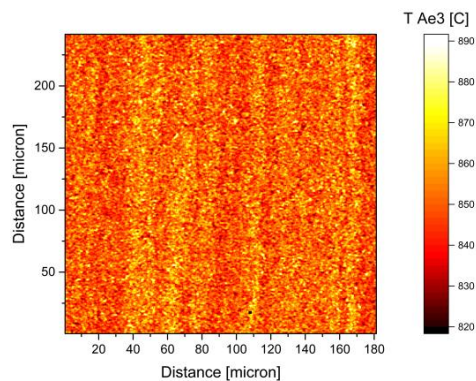
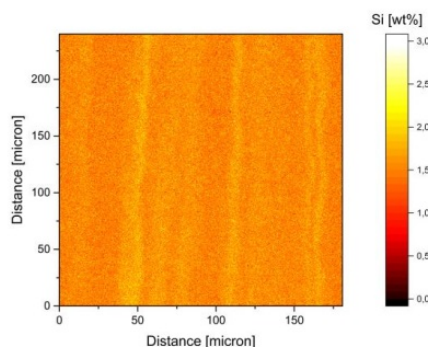
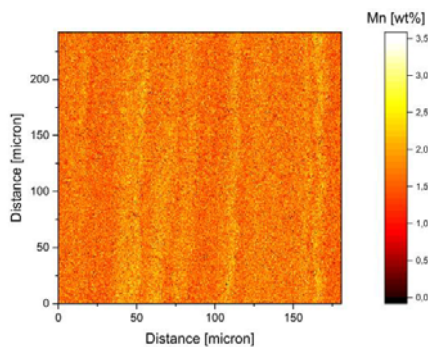
Substitutional elements interaction in steel.

Process-microstructure relationship.

## PhD research on Role of Silicon in strip steels

Recent Research activities:

Presence of microstructural bands can be detrimental for mechanical properties of steel. One of the factors causing their formation is presence of micro-chemical bands. The compositional inhomogeneity result in heterogeneous transformation temperatures as well as nucleation and growth.



Manganese and Silicon are both common alloying elements in strip steels. They are known to have opposite effect on transformation but since they tend to co-segregate during casting process, it is important to understand their interaction.

Other Achievements:

Conference Paper: **In situ study of austenite driven work-hardening behavior in a TRIP-assisted dual phase steel**; B.Ennis; E.Jimenez-Melero; E.Atzema; M.Krugla; M.A.Azeem; D.Rowley; D.Daisenberger; D.N.Hanlon; P.D.Lee; *presentation at International Symposium on Plasticity, 2016, Hawaii.*

Article: **High-modulus steels reinforced with ceramic particles through ingot casting process**; S.Chen; P.Seda; M.Krugla; R.A.Rijkenberg; *J. Mater. Sci. Technol.*, January 2016.