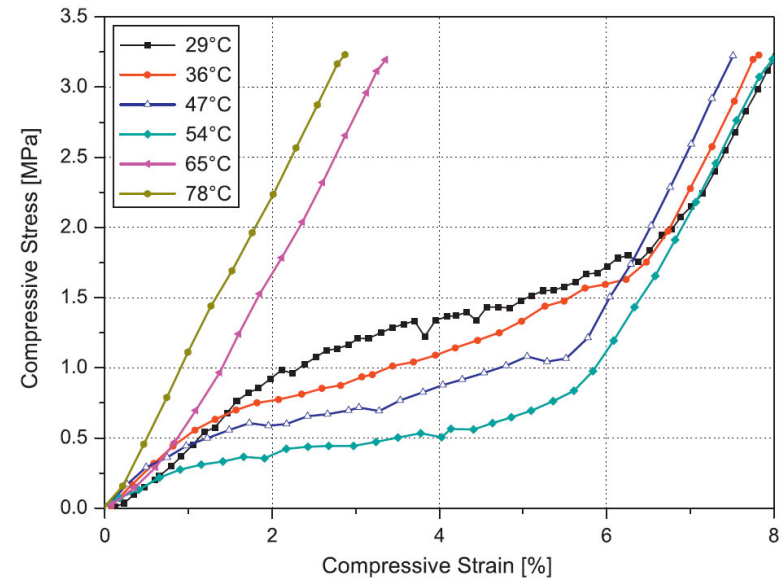


Q: How to make stress vs. strain measurements?

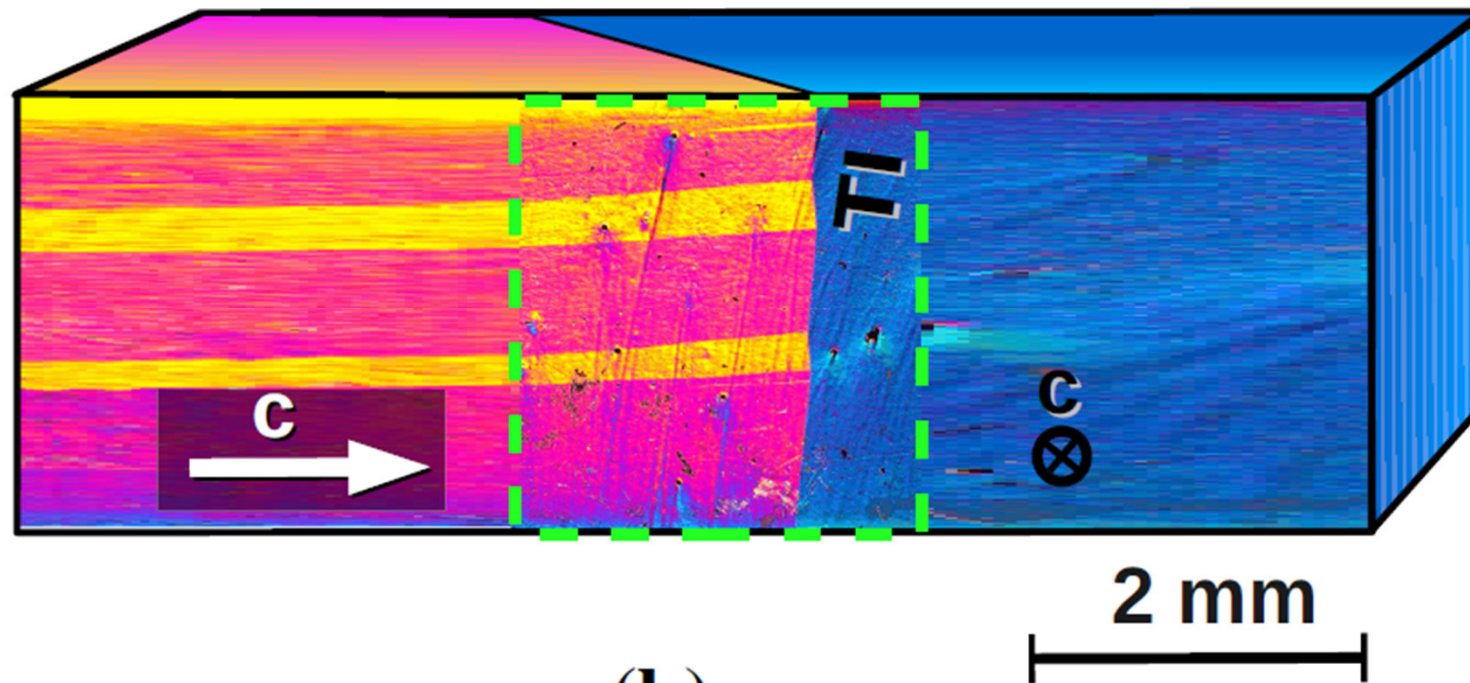


K. Rolfs, A. Mecklenburg, J.-M. Guldbakke, R.C. Wimpory, A. Raatz, J. Hesselbach, R. Schneider, JMMM 321 (2009) 1063

<http://de.wikipedia.org/wiki/Universalpruefmaschine>

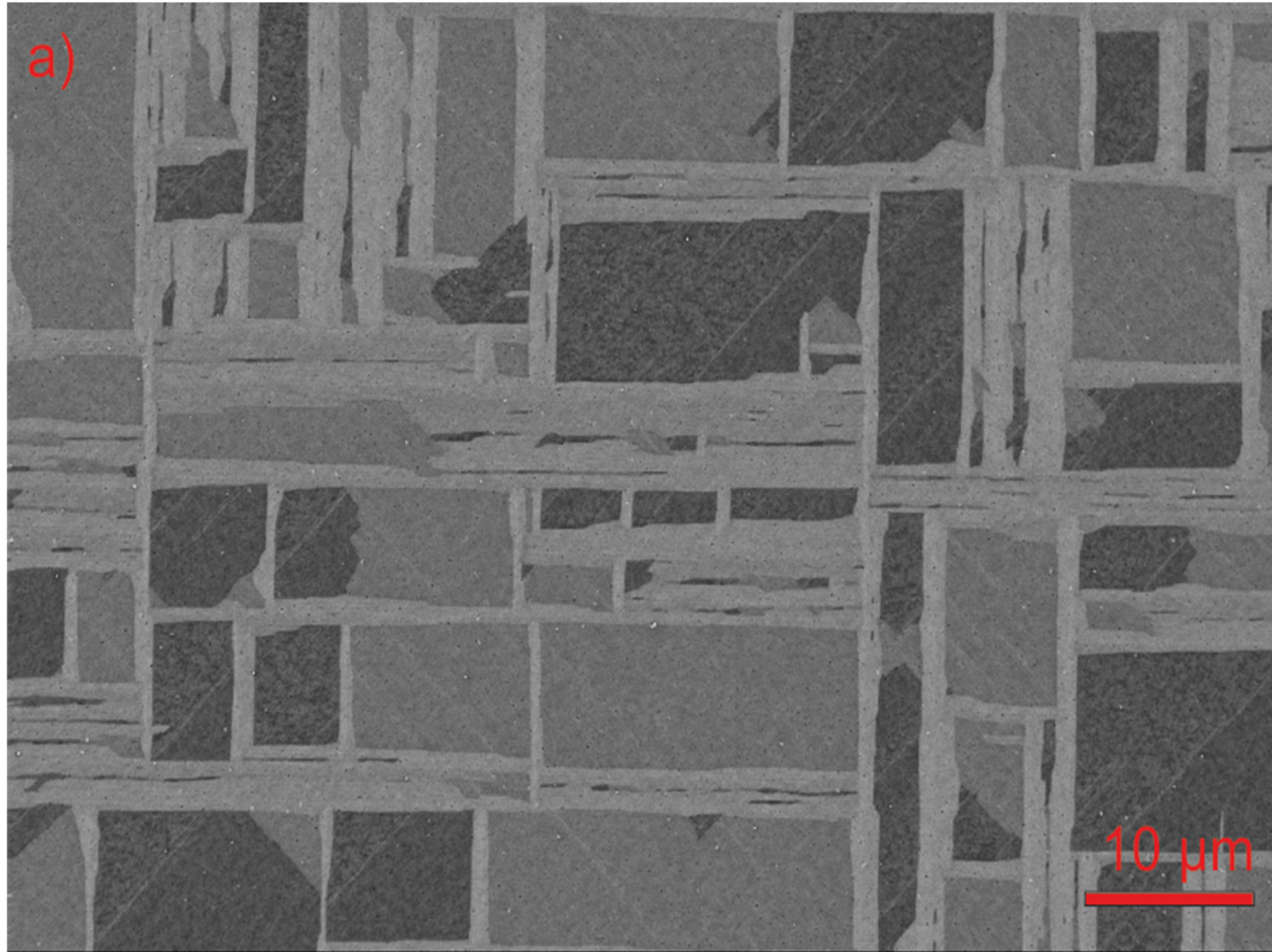
Q: How to observe twinning structure experimentally?

- Optical microscopy:
polarization contrast,
Normaski contrast



Q: How to observe twinning structure experimentally?

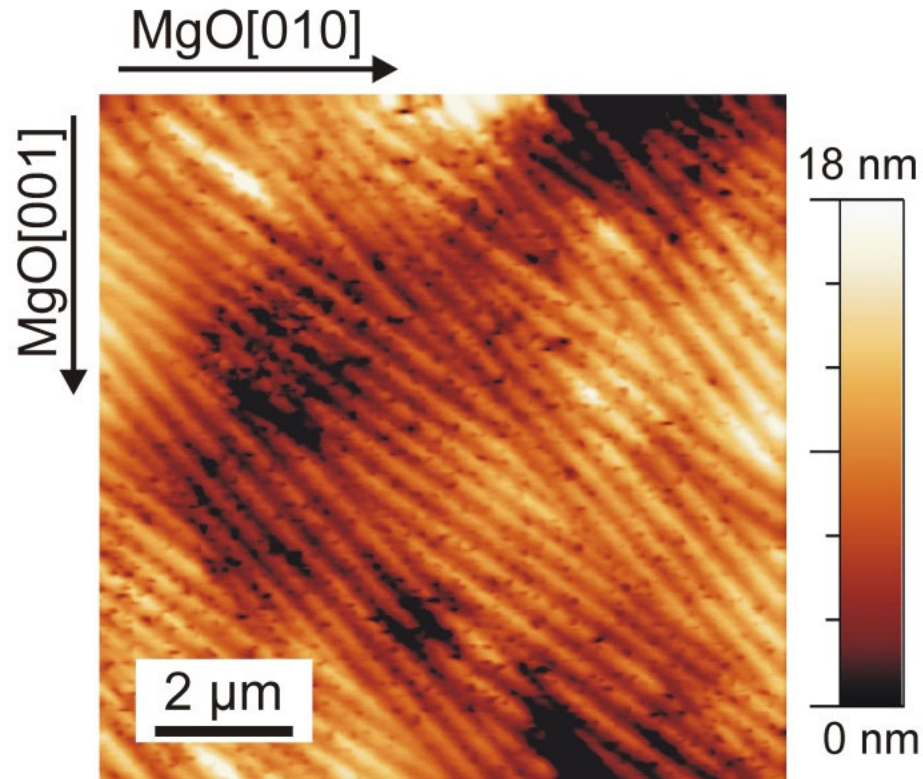
- SEM



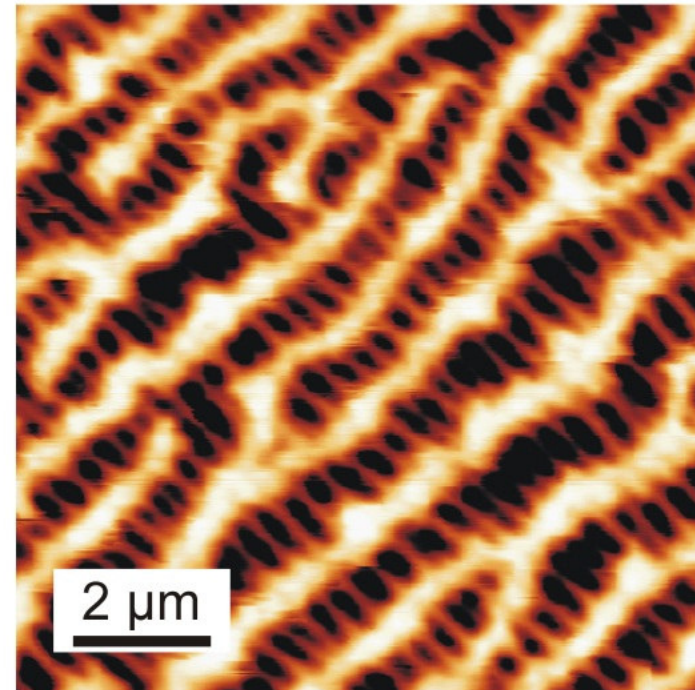
A. Backen, S. Kaufmann-Weiss et al. unpublished

Q: How to observe twinning structure experimentally?

- AFM



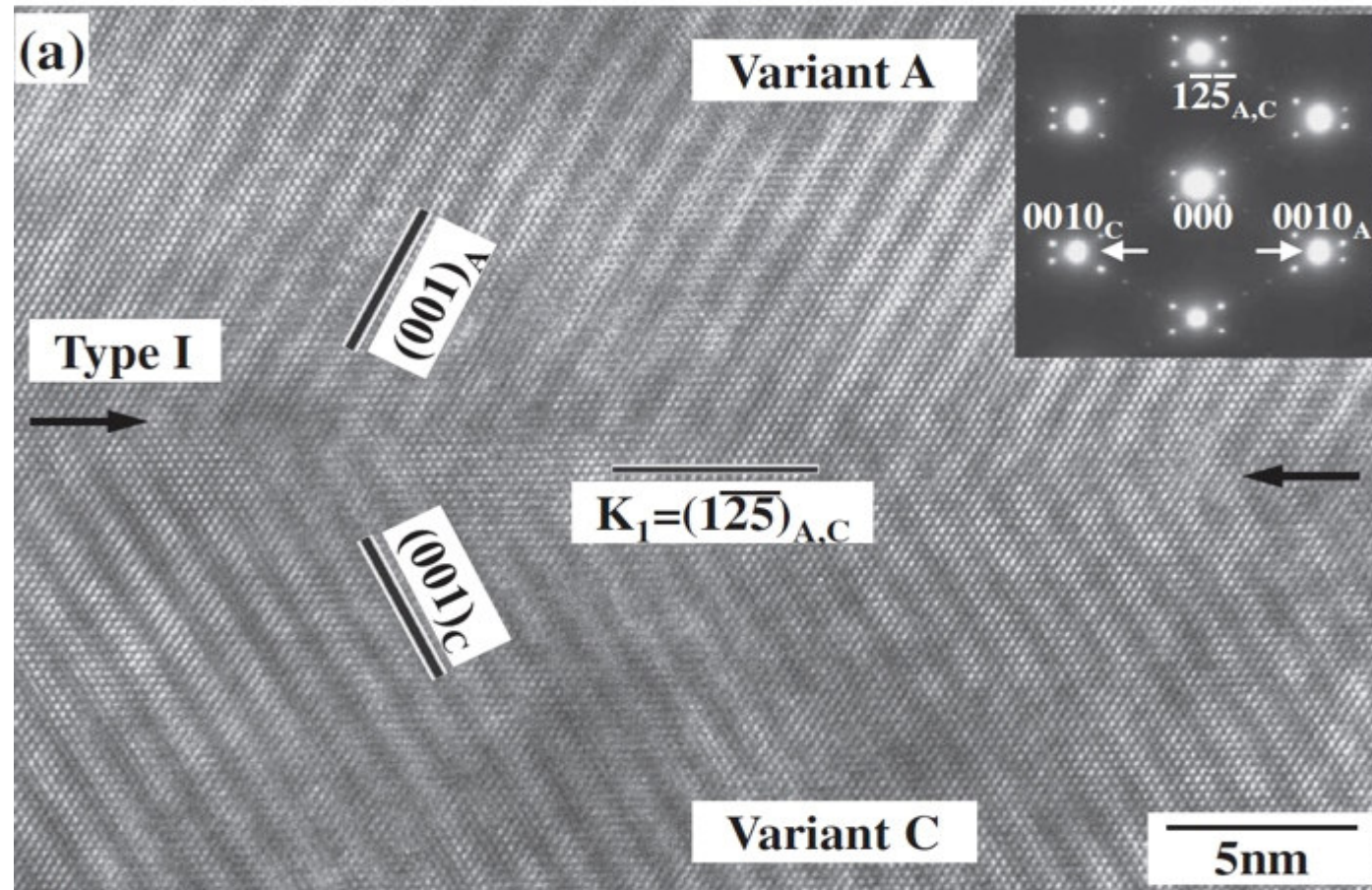
- MFM



A. Diestel, A. Backen, V. Neu, L. Schultz, and S. Fähler, Scripta Mat. 67, 423 (2012).

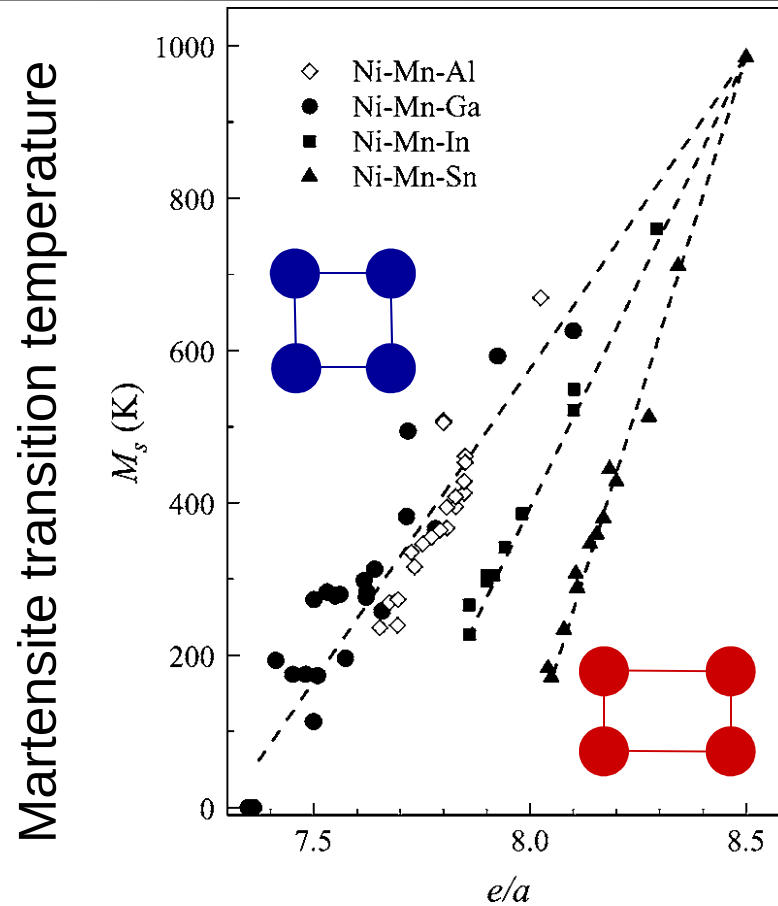
Q: How to observe twinning structure experimentally?

- TEM



M. Matsuda, Y. Yasumoto, K. Hashimoto, T. Hara, and M. Nishida, Mat. Trans. 53, 902 (2012).

Q: Influence of composition on transformation temperature



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Valence electron concentration



Filling electrons in unfavorable
states close to the zone boundary

- Similar to Hume-Rothery rules