

Estimation of line tension of individual dislocations from the thermal motion trajectories of inclusions attached to them

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Method for experimental determination of the line tension of individual dislocation fixed at its ends is proposed. The former uses transverse component of the displacements of inclusions attached to it. The displacements are related to random oscillations of the inclusions being exhibition of their thermal motion. The method is realized using *in-situ* TEM for a fixed dislocation segment with nanosized liquid Pb inclusions attached to it in Al-rich alloy.