

Microtectonics 206-23981 – 2 credits

Prof. Hanan Kisch

Syllabus

Flow and deformation. Deformation mechanisms : intracrystalline deformation, recovery, recrystallisation, grain-boundary-area reduction (GBAR), and static recrystallisation. Foliations, lineations, and lattice-preferred orientation (LPO). Shear zones : mylonites, sense of shear, and microscopic shear-sense indicators. Dilatation sites : fibrous veins, strain fringes, fibres and deformation path, non-fibrous strain shadows and strain caps. Porphyroblasts : porphyroblast nucleation and growth, inclusions in porphyroblasts, porphyroblast-matrix relations. Reaction rims.

Bibliography (מקובץ הקורסים)

1. Passchier, C.W. & Trouw, R.A.J. : Microtectonics. Springer-Verlag, Berlin 1998, 289 pp
2. Vernon, R.H. : A Practical Guide to Rock Microstructure. Cambridge University Press, Cambridge (U.K.), New York 2004, 594 pp.
3. Barker, A.J. : Introduction to Metamorphic Textures and Microstructures, 2nd edition. Stanley Thorne (Publishers) Ltd, Cheltenham (U.K.) 1998, 263 pp.
4. Kornprobst, J. : Les roches métamorphiques et leur signification géodynamique Précis de pétrologie. Masson, Paris 1994, 224 pp. (translation : Metamorphic Rocks and their Geodynamical Significance - a petrological handbook (translated by E.H. Chown). Kluwer Academic, Dordrecht (the Netherlands) 2002, 208 pp.)

Course Requirements

2 hr lecture

Grading

100% - final writing assignment