

References-Appendix A/B

- Argon, A. S. 1970. Internal stresses arising from the interaction of mobile dislocations. *Scripta Metallurgica* 4, 1001-1004.
- Barber, D. J. 1985. Dislocations and Microstructures. In Wenk, H.-R. (Eds.) *Preferred Orientation in Deformed Metals and Rocks: An Introduction to Modern Texture Analysis*, Academic Press, London, 149-182.
- Barr, T. D. & Houseman, G. A. 1992. Distribution of deformation around a fault in a non-linear ductile medium. *Geophysical Research Letters* 19, 1145-1148.
- Barr, T. D. & Houseman, G. A. 1996. Deformation fields around a fault embedded in a non-linear ductile medium. *Geophysical Journal International* 125, 473-490.
- Beeman, M. I. & Kohlstedt, D. I. 1988. Dislocation density: stress relationships in natural and synthetic sodium chloride. *Tectonophysics* 149, 147-161.
- Bishop, J. F. W. & Hill, R. 1951a. A theory of plastic distortion of a polycrystalline aggregated under combined stresses. *Philos. Magazine* 42, 414-427.
- Bishop, J. F. W. & Hill, R. 1951b. A theoretical derivation of the plastic properties of a polycrystalline face-centered metal. *Philos. Magazine* 42, 1298-1307.
- Bons, P. D. 1993. Experimental deformation of polyphase rock analogues. *Geologica Ultraiectina* 110, 207 pp.
- Bons, P. D., Barr, T. D. & ten Brink, C. E. 1997. The development of d-clasts in non-linear viscous materials: a numerical approach. *Tectonophysics* 270, 29-41.
- Bons, P. D., Jessell, M. W., Evans, L., Barr, T. D. & Stüwe, K. in press. Modelling of anisotropic grain growth in minerals. In: Koyi, A. H. & Mancktelow, N. S. (Eds.). Chapter 4: Tectonic Modeling: A Volume in Honor of Hans Ramberg, Geological Society of America Memoir 193.
- Carter, N. L. 1976. Steady state flow of rocks. *Rev. Geophys. Space Phys.* 14, 301-360.
- Carter, N. L. & Tsenn, M. C. 1987. Flow properties of continental lithosphere. *Tectonophysics* 136, 27-63.
- Christie, J. M. & Ord, A. 1980. Flow stress from microstructures of mylonites: Example and current assessment. *Journal of Geophysical Research* 85, 62537-6262.
- Clark, M. K. & Royden, L. H. 2000. Topographic ooze: Building the eastern margin of Tibet by lower crustal flow. *Geology* 28, 703-706.
- De Bresser, J. H. P., Peach, C. J., Reijs, J. P. J. & Spiers, C. J. 1998. On dynamic recrystallization during solid state flow: Effects of stress and temperature. *Geophysical Research Letters* 25, 3457-3460.
- De Bresser, J. H. P. 1996. Steady state dislocation densities in experimentally deformed calcite materials: Single crystals versus polycrystals. *Journal of Geophysical Research* 101, 22189-22201.
- Drury, M. R., Humphreys, F. J. & White, S. H. 1985. Large strain deformation studies using polycrystalline magnesium as rock analogue. Part II. Dynamic recrystallization mechanisms at high temperatures. *Phys. Earth Planet. Inter.* 40, 208-222.
- Drury, M. R. & Urai, J. L. 1990. Deformation-related recrystallization processes. *Tectonophysics* 172, 235-253.

- Durham, W. B., Goetze, C. & Blanke B. 1977. Plastic flow of oriented single crystals of olivine, 2, Observations and interpretations of the dislocation structures. *Journal of Geophysical Research* 82, 5755-5770.
- Evans, B. & Kohlstedt, D. L. 1995. Rheology of Rocks. In: Ahrens, T. J. (Eds.) *Rock Physics & Phase relations: A handbook of physical constants*, AGU Reference Shelf 3, Washington, 148-165.
- Fitz Gerald, J. D., Etheridge, M. A. & Vernon, R. H. 1993. Dynamic recrystallization in a naturally recrystallized albite. *Textures and Microstructures* 5, 219-237.
- Fliervoet, T. F., Drury, M. R. & Chopra, P. N. 1999. Crystallographic preferred orientations and misorientations in some olivine rocks deformed by diffusion or dislocation creep. *Tectonophysics* 303, 1-27.
- Fliervoet, T. F. & White, S. H. 1995. Quartz deformation in very fine grained quartzo-felspathic mylonite: a lack of evidence for dominant grain boundary sliding deformation. *Journal of Structural Geology* 17, 1095-1109.
- Frost, H. J. & Ashby, M. F. 1983. *Deformation – Mechanism Maps: The Plasticity and Creep of Metals and Ceramics*. Pergamon Press, Oxford.
- Gottstein, G. & Mecking, H. 1985. Recrystallization. In: Wenk, H.-R. (Eds.) *Preferred Orientation in Deformed Metals and Rocks: An Introduction to Modern Texture Analysis*, Academic Press, London, 183-214.
- Gottstein, G. & Shvindlerman, L. S. 1999. *Grain Boundary Migration in Metals: thermodynamics, Kinetics, Applications*, CRC Press, LLC, Boca Roca.
- Grest, G. S., Srolovitz, D. J. & Anderson, M. P. 1985. Computer simulation of grain growth IV. Anisotropic grain boundary energies. *Acta Metallurgica* 33, 509-520.
- Guillopé, M. & Poirier, J. P. 1979. Dynamic recrystallization during creep of single crystalline halite: an experimental study. *Journal of Geophysical Research* 4, 5557-5567.
- Hacker, B. R. & Kirby, S. H. 1993. High-pressure deformation of calcite marble and its transformation to aragonite under non-hydrostatic conditions. *Journal of Structural Geology* 15, 1207-1222.
- Hardwick, D., Sellars, C. M. & Tegart, W. J. McG. 1961. *Journal of the Institute of Metals* 90, 21.
- Hobbs, B. E. 1985. The geological significance of microfabric analyses. In: Wenk, H. -R. (Eds.) *Preferred orientation in deformed metals and rocks*. Academic Press, Orlando, 463-484.
- Hobbs, B. E., Means, W. D. & Williams, P. F. 1976. *An outline of structural geology*. Wiley, New York
- Hu, H. 1963. Annealing of silicon-iron single crystals. In: L. Himmel (Eds.) *Recovery and Recrystallization of Metals*, Wiley, New York, 311-378.
- Ion, S. E., Humphreys, F. J. & White, S. H. 1982. Dynamic recrystallization and the development of microstructure during the high temperature deformation of magnesium. *Acta Metallurgica* 30, 1909-1919.
- Jessell, M. W. & Lister, G. S. 1990. A simulation of the temperature dependence of quartz fabrics. In: R. J. Knipe & E. H. Rutter (Eds) *Deformation Mechanisms, Rheology and Tectonics*. Geological Society Special Publications 54, 353-362.
- Jessell, M. W., Bons P. D., Evans L., Barr T. D. & Stüwe K. 2001. Elle: the numerical simulation of metamorphic and deformation microstructures. *Computers and Geosciences* 27, 17-30.
- Kirby, S. H. 1983. Rheology of the lithosphere. *Rev. Geophys. Space Physics* 21, 1458-1487.
- Kirby, S. H. & Kronenberg, A. K. 1987. Rheology of the lithosphere: selected topics. *Reviews in Geophysics* 25, 1219-1244.

- Kocks, U. F., 1976. Laws for work-hardening and low-temperature creep. *J. Engl. Mat. Tech.* 98, 76-85.
- Kocks, U. F. 1985. Dislocation interactions: flow stress and strain hardening. In: Proceedings of the conference to celebrate the fiftieth anniversary of the concept of dislocation in crystals: Dislocations and Properties of real Materials, the Institute of Metals, London, 125-143.
- Kocks, U. F., Argon, A. S. & Ashby, M. F. 1975. *Program Material Science* 19.
- Kohlstedt, D. L. & Weathers, M. S. 1980. Deformation induced microstructures, paleo-piezometers and differential stresses in deeply eroded fault zones, *Journal of Geophysical Research* 85, 6269-6285.
- Knipe, R. J. 1989. Deformation mechanisms - recognition from natural tectonites. *Journal of Structural Geology* 11, 127-146.
- Knipe, R. J. & White, S. H. 1979. Deformation in low grade shear zones in the old red sandstone, S. W. Wales. *Journal of Structural Geology* 1, 53-66.
- Knipe, R. J. & Law, R. D. 1987. The influence of crystallographic orientation and grain boundary migration on microstructural and textural evolution in a S-C mylonite. *Tectonophysics* 135, 155-169.
- Kronenberg, A. K. & Tullis, J. 1984. Flow strengths of quartz aggregates: Grain size and pressure effects due to hydrolic weakening. *Journal of Geophysical Research* 89, 4281-4297.
- Law, R. D. 1990. Crystallographic fabrics: a selective review of their applications to research in structural geology. In: Knipe, R. J. & Rutter, E. H. (Eds) *Deformation Mechanisms, Rheology and Tectonics*, Geological Society Special Publications 54, 335-352.
- Lewis G. N. & Randall, M. 1961. *Thermodynamics*. McGraw Hill, New York.
- Lister, G. S., Paterson, M. S. & Hobbs, B. E. 1978. The simulation of fabric development in plastic deformation and its application to quartzite, the model. *Tectonophysics* 45, 107-158.
- Lister, G. S. & Paterson, M. S. 1979. The simulation of fabric development during plastic deformation and its application to quartzite: fabric transitions. *Journal of Structural Geology* 1, 99-115.
- Lloyd, G. E., Law, R. D., Mainprice, D. & Wheeler, J. 1992. Microstructural and crystal fabric evolution during shear zone formation. *Journal of Structural Geology* 14, 1079-1100.
- Means, W. D., Hobbs, B. E., Lister, G. S. & Williams, P.F. 1980. Vorticity and non-coaxiality in progressive deformation. *Journal of Structural Geology* 2, 371-378.
- Mecking, H. & Kocks, U. F. 1981. Kinetics of flow and strain-hardening. *Acta Metallurgica* 29, 1865-1875.
- Nicolls, J. H. & McCormick, P. G. 1970. *Metallurgical Transactions* 1, 3469.
- Olgaard, D. L. & Evans, B. 1986. Effect of second phase particles on grain growth in calcite. *Journal of the American Ceramical Society* 69C, 272-277.
- Panozzo, R. 1983. Two dimensional analysis of shape-fabric using projections of digitized lines in a plane. *Tectonophysics* 95, 279-294.
- Panozzo, R. 1984. Two-dimensional strain from the orientation of lines in a plane. *Journal of Structural Geology* 6, 215-221.
- Pfiffner, O. A. & Ramsay, J. G. 1982. Constraints on geological strain rates: Arguments from finite strain states of naturally deformed rocks. *Journal of Geophysical Research* 87, 311-321.
- Poirier, J.-P. 1985. *Creep of Crystals*. Cambridge University Press, Cambridge.
- Post, A. D., Tullis, J. & Yund, R. A. 1996. Effect of chemical environment on dislocation creep of quartzite. *Journal of Geophysical Research* 101, 22143-22155.

- Prior, D. J., Knipe, R. J. & Handy, M. R. 1990. Estimates of the rates of microstructural changes in mylonites. In: Knipe, R. J. and Rutter, E. H. (Eds) *Deformation Mechanisms, Rheology and Tectonics*, Geological Society Special Publication 54, 309-319.
- Randle, V. 1992. Microtexture determination and its applications. The Institute of Materials, London.
- Read, W. T. & Shockley, E. 1950. Dislocation models of crystal grain boundaries. *Physical Review* 78, 275-289.
- Sandström, R. 1977. Subgrain growth occurring by boundary migration. *Acta Metallurgica* 25, 905-911.
- Schmid, S. M. 1976. Rheological evidence for changes in the deformation mechanism of Solnhofen limestone towards low stresses. *Tectonophysics* 31, T21-T28.
- Stöckhert, B. & Duyster, J. 2000. Discontinuous grain growth in recrystallised vein quartz - implications for grain boundary structure, grain boundary mobility, crystallographic preferred orientation, and stress history. *Journal of Structural Geology* 21, 1477-1490.
- Stöckhert, B., Brix, M. R., Kleinschrodt, R., Hurford, A, J. & Wirth, R. 1999. Thermochronometry and microstructures of quartz – a comparison with experimental flow laws and prediction on the temperature of the brittle-plastic transition. *Journal of Structural Geology* 21, 351-369.
- Stüwe, H. P. 1965. *Acta Metallurgica* 13, 1337.
- Trimby, P. W., Prior, D. J. & Wheeler, J. 1998. Grain boundary hierarchy development in a quartz mylonite. *Journal of Structural Geology* 20, 913-935.
- Tullis, J. & Yund, R. A. 1982. Grain growth kinetics of quartz and calcite aggregates. *Journal of Geology* 90, 301-318.
- Tullis, J. & Yund, R. A. 1985. Dynamic recrystallization of feldspar: a mechanism for ductile shear zone formation. *Geology* 13, 238-241.
- Tullis, J. & Yund, R. A. 1988. The effects of hydrogen, oxygen and water fugacities and confining pressure on the strength of quartz aggregates. *Trans. AGU* 69, 478.
- Tullis, J. & Yund, R. A. 1989. Hydrolytic weakening of quartz aggregates: the effects of water and pressure on recovery. *Geophysical Research Letters* 16, 1343-1346.
- Twiss, R. J. 1977. Theory and applicability of recrystallized grain size paleopiezometer. *Pure and Applied Geophysics* 115, 199-226.
- Urai, J. L. 1983. Deformation of wet salt rocks. Ph D thesis, Utrecht Univ, pp 1-223.
- Urai, J. L., Means, W. D. & Lister, G. S. 1986. Dynamic recrystallization of minerals. *American Geophysical Union Geophysical Monograph* 36, 161-199.
- von Mises, R. 1928. Mechanik der plastischen Formänderung von Kristallen. *Z. Angew. Math. Mech.* 8, 161-185.
- Weaire, D. & Riviere, N. 1984. Soap, Cells and Statistics – Random Patterns in Two Dimensions. *Contemporary Physics* 25, 59-99.
- Weiss, L.E. & Wenk H.- R. 1985. An introduction. In: Wenk, H.-R. (Eds.) *Preferred Orientation in Deformed Metals and Rocks: An Introduction to Modern Texture Analysis*, Academic Press, London, pg. 1-9.
- White, S. H. 1977. Geological significance of recovery and recrystallization processes in quartz. *Tectonophysics* 39, 143-170.
- White, S. H. 1979a. Grain and sub-grain size variations across a mylonite zone. *Contributions to Mineralogy and Petrology* 70, 193-202.

Internet References

- Barr & Houseman, 1999. Basil – Finite element program, <http://www.earth.monash.edu.au/Research/Basil>
- Evans et al. 1999. Elle – Micro-process based simulation of metamorphic and deformation texture development, <http://www.earth.monash.edu.au/Research/Elle>

Evans et al. 2000. Elle Manual, <http://orion.earth.monash.edu.au/Research/Elle/Monash/index.html>

Shewchuk, Triangle:A Two-Dimensional quality Mesh Generator and Delaunay Triangulator, <http://www.cs.cmu.edu/%Equake/triangle.html>

