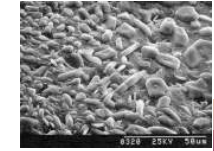


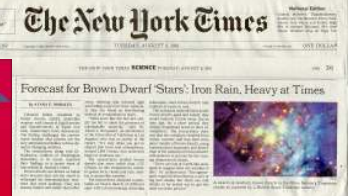
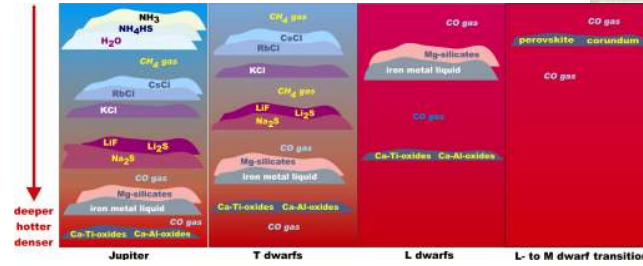
Anhydrite on calcite



Anhydrite on diopside

Thermochemical and kinetic models

Atmospheres of Gas-Giant (Exo-) Planets & Brown Dwarfs (failed stars)



Work from this lab featured in the NY Times on 6 Aug. 2002

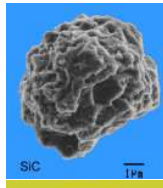
Hot atmospheres may contain clouds of salts, silicates, and/or metal

Experiments: Planetary atmosphere – Surface reactions e.g., mineral stability on Venus

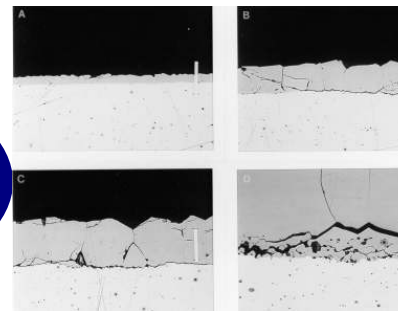
Research in the Planetary Chemistry Laboratory
Bruce Fegley,
Katharina Lodders
Laura Schaefer



Chemistry in Circumstellar Environments



Dust Formation in Giant Stars & Supernovae
 Dust grains formed in the outflows from such stars are preserved in primitive meteorites

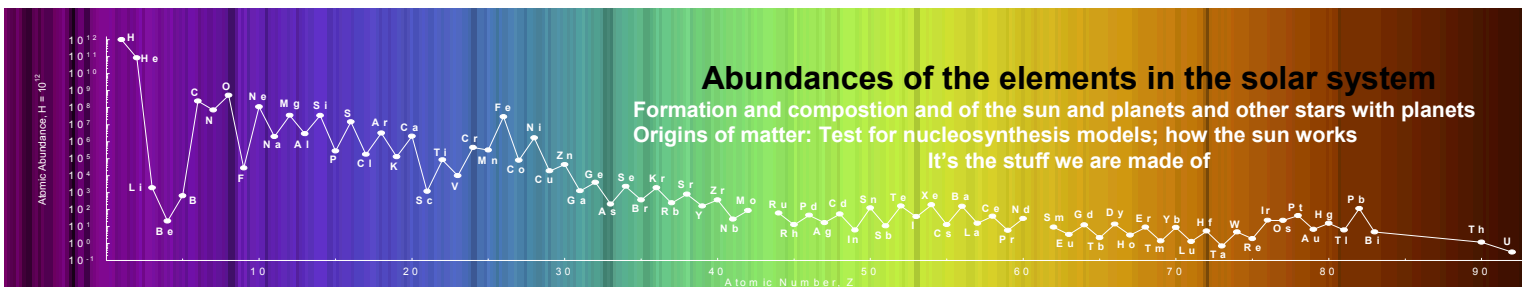


Troilite (FeS) layer growth on iron-nickel metal with time



Magnetite growth on Fe-Ni metal

Experiments: Mineral stability in protoplanetary disks; e.g., kinetics of mineral formation in the solar nebula



K. Lodders, H. Palme, & H.P. Gail 2009, Solar System Abundances of the Elements, in Landolt-Börnstein, New Series, Vol. VI/4B, Chap. 4.4, Trümper, J.E. (ed.), Berlin, Heidelberg, New York: Springer-Verlag, 2009

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