**Prof. Dr. Dr. hc Günter Frohberg
Emeritus TU Berlin (D**)
Institute for Metals Research



Günter Frohberg was born in 1935. Education: Study of physics at Univ. Münster (D) with doctorate in theoretical physics. Honour: Dr. hc. from the University of Miskolc (H) in 1993.

Career:

* Professor at TU Berlin 1971-2001
* Director of the institute until 2001
* Project Scientist for ESA’s Sounding Rocket
experiments at Esrange (S) 1985-2008
* Head of the advisory group for space experiments in material science at the German Ministry for Research and Technology (BMFT, later DLR) and consultant for many years starting in 1985.
* Main research areas: crystal defects, deformation, diffusion, thermo- and electro-diffusion, surface diffusion in/on solid metals / nimonics / metglasses until 1980 and later.

Micro-g expertise:

* Experimental projects under DLR and DFG contracts until 2008
* First reliable self-diffusion experiments in 1983 in liquid metals by μg-experiments (natural Sn with isotopes Sn112/124) on SPACELAB-1, module HTT, long capillary technique.
* First μg-results for the liquid diffusion coefficient with very high accuracy (0.5%), finding the T-square-law for self-diffusion in liquid metals.
* First direct results for an isotope-effect in liquid metals (Sn).
* Confirmation of the T-square-law n Space Shuttle flights 1985(D-1) and 1993(D-2) by experiments with HTT on other metals.
* Development of a new sophisticated shear-cell-technique (module AGAT) designed to fly self-and inter-diffusion experiments in metallic alloys on Russian space flights (FOTON-12 and FOTON-M2) starting 1995.
* The elimination of the Marangoni-effect was shown, using the new shear cell technique together with parallel 1g experiments.
* Co-researchers of the micro-g experiments were: H. Wever, K-H Kraatz, S. Suzuki, A. Griesche, G. Müller-Vogt, R. Rosu-Pflumm.