

## Curriculum vitae



**Name:** Peter R u d o l p h

**Titles:** Professor, Doctor habil., Doctor engin.

**Home address:** Helga-Hahnemann-Str. 57,  
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**Present affiliation:** Crystal Technology Consulting (CTC),  
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**Birth:** July 1-st, 1945, Gera, Germany

**Nationality:** German

**Marital status:** married, one son (1977)

**Languages:** English (fluent), Russian (perfect),  
German (mother language)

**Health:** excellent

**Education, qualifications and positions:**

since 2011: self-employed at CTC

1994 - 2011 employed at the Institute of Crystal Growth in Berlin  
head of competence field technology developments

1993 - 1994, 1998: Visiting Professor at the Institute for Materials Research  
of Tohoku University in Sendai (Japan)

1985 - 1993: University Professor for Crystallography and Materials  
Science at the Humboldt University in Berlin (Germany)

1980 - 1985: Lecturer (Docent) of Technical Crystallography and  
Crystal Growth at the Humboldt University in Berlin

1979: Dr. sc. nat. (habil) of Crystallography (DSc)  
Thesis at the Humboldt University in Berlin on  
Shaped Crystal Growth

1972: PhD (Dr. engin.) of Electronic Technology  
Thesis at the Technical University in Lviv (Ukraine) on  
Thin Film Layers of CdSb on Insulating Substrates

1969: Diploma (Dipl. engin.) of Electronic Technology  
Diploma thesis at the Technical University in Lviv on  
Development and Use of an Automatic Hall Equipment

**Publications:** 293 (incl. 31 monographs/contributions, 8 editions, 35  
patents, 13 book reviews), ca. 500 conference papers

**Teaching:** > 3000 hrs university and school lectures in Berlin, Halle,  
Freiberg, Freiburg, Jena (Germany), Ulan Bator (Mongolia),  
Madrid (Spain), Sendai, Osaka, Zao, Shiga (Japan), Monastir  
(Tunesia), Madras/Chennai, Bangalore (India), Lausanne,  
Beatenberg (Switzerland), Padua, Rimini, Trieste (Italy), Sao  
Paulo, Campinas (Brazil), La Pedrera (Uruguay), Puebla,

**Mexico City (Mexico), Riga (Latvia), Seoul (South Korea), Brasov (Romania), Dalian, Hangzhou, Xian (China), Grenoble, Lyon (France), Gdansk (Poland), Huntsville, Park City of Salt Lake City, Brookhaven Nat. Lab. (USA), Moscow (Russia), Prague (Czech. Republic)**

*Lectures:*

**Fundamentals of Phase Transition and Crystal Growth: Thermodynamics, Kinetics, Transport of Heat and Mass. Fundamentals of Material Science, Physico-Chemical Crystallography, Crystal Defects - Dynamics and Engineering, Crystal Growth Technology, Applications of Single Crystals**

*Materials experiences :*

**Si, Ge, CdSb, InSb, GaAs, InP, GaP, CdTe, CdZnTe, HgCdTe, ZnSe, PbTe, PbSnTe, LiNbO<sub>3</sub>, PbWO<sub>4</sub>, eutectics (i.e. sapphire-YAG composition fibers), CZ- and mc-PV-Silicon**

*Growth methods:*

**vertical/horizontal Bridgman, shaped crystal growth (EFG), Czochralski growth (LEC, VCz), THM, fiber crystal growth, gas phase sublimation, microgravity experiments 1978 and 1993, growth under magnetic fields, Si ingot crystallization**

*Research fields:*

**growth technology of semiconductor compounds and oxides, stoichiometry, point defects, dislocation dynamics, segregation, convection, theory of crystal growth (thermodynamics, kinetics, transport), melt structure, non-steady magnetic fields, ultrasonic vibration**

*Industrial Cooperations:*

**Freiberger FCM GmbH/Germany, Steremat Berlin, Auteam, SolarValue, Bruker BK, Schott Solar Wafer, Solar World /USA, Intex Corp./USA, MCP Technol./UK, ECM Grenoble, Furukawa Co./Japan, Nihon Kessho Co./Japan, Neosemitec Co. Seoul/Korea, ...**

*Memberships:*

**IUCr-Commission "Crystal Growth and Characterization" (- 2011), Member of Council of Int. Org. of Crystal Growth (- 2011) (IOCG), President of German Ass. of Crystal Growth (2010-11, Vice-President 2012-13), Head of DGKK working group "Kinetics" (- 2009), Scientific Council of IKZ Berlin (- 2011), Advisory Board of Solarregion Berlin-Brandenburg eV (2011-14), American Ass. for Crystal Growth, International Advisory Board of IMR of Tohoku University Sendai, Japan,**

*Editorial staffs:*

**Associate Editor of J. Crystal Growth, Advisory Board of the J. Crystal Research and Technology, International Editors Committee of Journal of the Korean Crystal Growth and Crystal Technology, Advisory Board of J. Functional Materials of Ukraina Editorial staff of the newsletter of the German Association of Crystal Growth (DGKK) (- 2009)**

*Awards:*

**Herder Medal at high-school-leaving, Berlin 1964; Medal of President of Academy of Science for crystal growth experiments in space aboard Sojuz-3 (1978); Medal of the German Association of Crystallography 1990; Winner of the Innovation Prize Berlin-Brandenburg 2001 and 2008.**