

Curriculum vitae



Name: Peter Rudolph

Titles: Professor, Doctor habil., Doctor engin.

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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 wit Petra Rudolph (née Platzeck), one son (1977)

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

Health: excellent

Education, qualifications and positions:

2018: First-class fellowship of Japan Society for the Promotion of
Science (JSPS) at Tohoku University in Sendai (Japan)

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: 295 (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, Frei-
berg, Freiburg, Jena (Germany), Ulan Bator (Mongolia), Madrid
(Spain), Sendai, Osaka, Zao, Shiga (Japan), Monastir (Tune-
sia), Chennai, Bangalore (India), Lausanne, Beatenberg, Zu-
rich (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, Shijiazhuang, Jinan (China), Grenoble, Lyon (France), Gdansk (Poland), Huntsville, Park City/Salt Lake City, Brookhaven Nat. Lab. (USA), Tel Aviv, Jerusalem, Re-chovot (Israel), 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, LiNbO₃, PbWO₄, 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, Helios Resource Moscow/Russia,

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:

Editor of Journal of Crystal Growth (Elsevier), 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; Honorary Member of DGKK 2020.