

Prof. Dr. Johann Peter Plank

Chair

[Construction Chemistry](#)

Department

[Chemistry](#)

Contact Details

[Business card at TUMonline](#)



Academic Career and Research Areas

Prof. Plank (b. 1952) works in the field of inorganic (cement chemistry, silicates, aluminates, phosphate, CaSO₄ phases) and organic binding agents (latex dispersions, epoxy resins, polyurethane). He also studies construction chemical admixtures (polycondensate resins, polycarboxylate, cellulose ethers, siloxanes, biopolymers), colloid chemistry, interface and surface phenomena and nanochemistry (nanomaterials and composite materials).

Prof. Dr. Johann Plank has taught at TUM Asia for over 10 years, ever since the Master of Science in Industrial Chemistry programme was offered in Singapore. Like many other TUM professors, he has many years of experience working in the industry and he teaches what he knows best, based on real life examples of what he has experienced first hand. Professor Plank specialises in construction chemicals, such as cement, and he highlights the importance of such fields to his students in various ways.

After studying chemistry in Regensburg, he did his doctorate in 1980 under Prof. Herrmann. He initially worked as a biochemistry research group leader at SKW in Trostberg from 1980-86. In 1997, he became head of research in construction and oil field polymers. This work took him to the USA, Singapore and Japan. In 2001, he became a full professor at TUM. Visiting professorships took him to a number of institutes, including Wuhan University of Technology, the National University of Singapore and the Tokyo Institute of Technology. Prof. Plank is chairman of the board of trustees of the Leonhard Lorenz Foundation and co-editor of the journal Cement & Concrete Research.

- [Curriculum Vitae](#)
- [Courses](#)

Awards

- Kulturpreis Ostbayern der OBAG für herausragende Dissertation (1982)

Key Publications ([all publications](#))

Dubina E, Black L, Sieber R, Plank J: "Interaction of water vapour with anhydrous cement minerals". *Advances in Applied Ceramics*. 2010; 109(5): 260-268.

Gretz M, Plank J: "Hybrid additives for construction applications, fabricated through layer-by-layer adsorption of polycondensate type superplasticizers on latex templates". *Colloids and Surfaces A: Physicochem. Eng. Aspects*. 2010; 366: 38-44.

[Abstract](#)

Plank J, Schröfl C, Gruber M, Lesti M, Sieber R: "Effectiveness of polycarboxylate superplasticizers in ultra-high strength concrete: the importance of PCE compatibility with silica fume". *Journal of Advanced Concrete Technology*. 2009; 7: 5-12.

Plank J, Dugonjic-Bilic F, Recalde Lummer N: "Impact of the steric position of phosphonate groups in poly(N,N-dimethylacrylamide-co-2-acrylamido-2-methylpropanesulfonate-co-2-X-phosphonate) on its adsorbed conformation on cement: Comparison of vinylphosphonic acid and 2-acrylamido-2-methylpropane phosphonate modified terpolymers". *Journal of Applied Polymer Science*. 2009; 1758-1768.

Plank J, Dai Z, Andres P: "Preparation and characterisation of new Ca-Al-polycarboxylate layered double hydroxides". *Materials Letters*. 2006; 60: 3614-3617.

[Abstract](#)
