

**Obituary Prof. Dr. Robert F. Singer**

On 26 January 2019, Prof. Dr. Robert F. Singer died unexpectedly at the age of 68.

Robert Singer, born on 17 April 1950 in Jena, was one of the first students of the new Erlangen course in materials science. After working as an assistant and earning his doctorate from his teacher Bernhard Illsner in 1978, he joined Bill Nix at Stanford University in California, USA, as a postdoctoral fellow in 1979. He returned to Europe in 1980 and began working for ABB in Baden (Switzerland). He worked in various areas of materials technology, most recently as head of the ceramics department in corporate research and coordinator of the Group's international fuel cell activities. In 1991 he was appointed to the Chair of Materials Science and Technology of Metals (WTM) at the Friedrich-Alexander-University Erlangen-Nuremberg (FAU). In addition to his diverse university activities, his name also stands for the application-oriented research institutes in Fürth, which he has led to success with his unique commitment. In 2000, he founded New Materials Fürth (NMF) GmbH, which he headed as Managing Director until his death. He conceived the NMF as an application-oriented research institution of the Free State of Bavaria with the aim of implementing new materials and manufacturing processes in industry-oriented solutions in close cooperation with partners from industry. In 2006 he also founded the Fürth Central Institute for New Materials and Process Technology (ZMP) at the University of Erlangen-Nuremberg, where scientists from the fields of materials science, chemistry, chemical engineering and mechanical engineering work together on application-oriented research.

In 2006/2007 he was President of the Federation of European Materials Societies (FEMS). During his professional life, he has received numerous prizes/awards, such as the Georg Sachs Prize (1985), the Heyn-Denkmünze (2010) and the Max Grundig Memorial Prize (2014). He was a member of the Bavarian Academy of Sciences, honorary member of the FEMS and received honorary calls to Delft (1991) and Bremen (2001).

Robert Singer was a renowned scientist, university lecturer and manager with high national and international visibility and charisma. He was active in many technical and scientific committees, such as the expert group of the European Science Foundation MatSEEC in the field of material sciences or the Advisory Board M2i Materials Innovation Institute in Delft. Robert Singer's field of research was the correlation between the manufacturing process, the resulting microstructure and the properties of metallic materials associated with the microstructure. He has always focused on two research areas: the development of new manufacturing processes for materials and components, and the parallel provision of tailor-made materials. By implementing new, innovative process concepts, he has made important contributions in the field of foundry technology and powder metallurgy. These include investment casting of superalloys, thixo injection moulding of magnesium and continuous extrusion of powders. He was especially interested in the development of new nickel-base superalloys, their manufacturing processes and joining processes.

He is a pioneer in the systematic, thermodynamically based numerical development of new superalloys. In addition to developing the scientific basis, the industrial implementation of the results has always been a central interest for him.

Robert Singer was an outstanding personality who achieved the seemingly impossible in many areas with scientific excellence and determination. His tireless and successful work and his visionary focus on future topics have not only had a decisive and lasting impact on the WTM Chair, but also on his scientific environment. As a university lecturer, he was a role model, motivator and mentor for the professional and personal development of a large number of students and staff.

All of us who have come to know and appreciate Robert Singer, and who have had the opportunity to work with him, are deeply affected by his sudden death. Just three weeks ago, the authors of this obituary were able to experience Robert Singer at a meeting of the SFB/Transregio 103 "Superlegierungen", which took place at his beloved second residence in Grainau an der Zugspitze. Robert Singer also helped to initiate, shape and design this SFB with his foresight and great knowledge. Everyone involved will miss him very much.

The German Materials Society mourns the loss of a successful scientist and highly esteemed colleague and will honor his memory.

C. Körner, Erlangen

M. Göken, Erlangen

G. Eggeler, Bochum