

Former Ruzicka Prize Awardees

1957	Georg Büchi, MIT Cambridge	1990	Charles Fehr, Firmenich SA Genf
1958	Albert Eschenmoser, ETH Zurich	1991	Alois Renn, ETH Zurich
1959	Robert Schwyzer, University Zurich	1992	Beat H. Meier, ETH Zurich
1960	Heinrich Zollinger, ETH Zurich	1993	Renato Zenobi, EPFL
1961	Duilio Arigoni, ETH Zurich	1994	Peter Wipf, University of Pittsburgh
1962	André Dreiding, University Zurich	1995	Heinz Moser, Ciba Basel
1963	Max Thürkauf, University Basel	1996	Aleksander Rebane, ETH Zurich
1964	Henri Isliker, University Lausanne	1997	Yves Rubin, UCLA
1965	Karl Heusler, Woodward Institute Basel	1998	Alan E. Mark, ETH Zurich
1966	Charles Weissmann, New York University	1999	Ingo Fischer, ETH Zurich
1967	Günther Ohloff, Firmenich SA Genf	2000	Ursula Röthlisberger, ETH Zurich
1968	Kurt Schaffner, ETH Zurich	2001	Wolfgang Meier, University Basel
1969	Richard R. Ernst, ETH Zurich	2002	Michael Hippler, ETH Zurich
1970	Gerhard Geier, ETH Zurich	2002	Detlef Günther, ETH Zurich
1971	Rolf Scheffold, University Fribourg	2003	Matthias Ernst, ETH Zurich
1972	Hansuli Wehrli, ETH Zurich	2004	Marco Tomaselli, ETH Zurich
1973	Hans Dutler, ETH Zurich	2007	J. Wendelin Stark, ETH Zurich
1974	Hans Gerlach, ETH Zurich	2008	Philippe H. Hünenberger, ETH Zurich
1975	John Ammeter, ETH Zurich	2009	Karl Gademann, EPFL
1976	Camille Ganter, ETH Zurich	2010	Stefan Willitsch, University Basel
1977	Valentin Rautenstrauch, Firmenich SA Genf	2011	Ryan Gilmore, ETH Zurich
1978	Werner Hug, University Fribourg	2012	Hans Jakob Wörner, ETH Zurich
1979	Urs-Peter Fringeli, ETH Zurich	2013	Maksym Kovalenko, ETH Zurich/EMPA
1980	Ferdinand Näf, Firmenich SA Genf	2014	Cristina Müller, ETH Zurich/PSI
1981	Richard Cherry, ETH Zurich	2015	Henning Jessen, University Zurich
1982	Roland M. Wenger, Sandoz AG Basel	2016	Bill Morandi, MPI für Kohleforschung
1983	Harold Baumann, ETH Zurich	2017	Maria Ibáñez, ETH Zurich
1984	Alexander Wokaun, ETH Zurich	2017	Chih-Jen Shih, ETH Zurich
1985	Ulrich Müller-Herold, ETH Zurich	2018	Christof Sparr, University Basel
1986	Hubert E. van den Bergh, EPFL	2019	Dmitry Katayev, ETH Zurich
1987	Alfons Baiker, ETH Zurich	2020	Patrick Hemberger, PSI Villigen
1988	Thomas Laube, ETH Zurich	2021	Fabian von Rohr, University Zurich
1989	Samuel Leutwyler, University Bern		

Ruzicka Prize 2021

Prof. Dr. Fabian von Rohr

**Discovery of Quantum Materials by
Combining Chemical and Physical
Design Principles**

**November 18, 2021, 5–6 pm
HCI G 3, Hönggerberg**

Prof. Dr. Karl-Heinz Altmann – Welcome
Prof. Dr. Karl Gademann – Laudatio
Prof. Dr. Fabian von Rohr – Lecture
Prof. Dr. Detlef Günther – Award Ceremony



The Ruzicka Prize

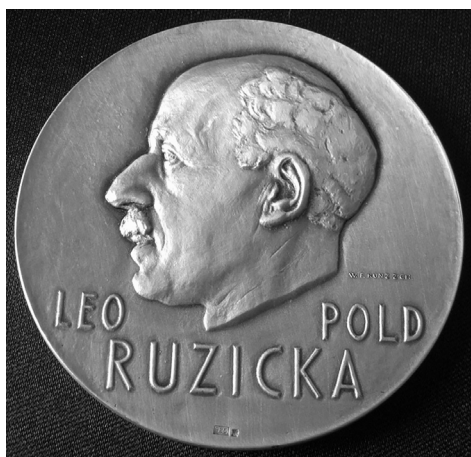
The annually awarded Ruzicka Prize, named after ETH professor and Nobel laureate Leopold Ruzicka, is considered one of the most important awards for the promotion of young scientists in the field of chemistry in Switzerland.

Leopold Ruzicka was born in Vukovar, Croatia, on September 13, 1887. He studied chemistry at the Technical University in Karlsruhe from 1906 to 1910, and was an assistant at ETH Zurich from 1912 to 1916. Subsequently, he worked for the chemical industry and was a private lecturer. From 1923 Ruzicka was a titular professor at ETH Zurich. In 1927, he was appointed professor of organic chemistry at the University of Utrecht. In 1929 he returned to ETH Zurich as a professor, succeeding Richard Kuhn, and remained there until his retirement in 1957.

In 1939, his work in the field of polymethylenes and higher terpene compounds was awarded the Nobel Prize in Chemistry. After his death on September 26, 1976, in Mammern (Switzerland), a foundation and fund were established with the aim of annually awarding

a young researcher for an outstanding publication in the field of chemistry.

As an instrument for promoting young researchers, the Ruzicka Prize has been extraordinarily successful: since it was first awarded in 1957, the board of trustees has discovered several talented researchers. Many of those who were private lecturers, group leaders or assistant professors when they received the prize now have leading positions in well-known research institutions or industry. Several have been appointed as professors, quite a few are active at ETH Zurich and other Swiss universities.



Prof. Dr. Karl-Heinz Altmann
Head of the Department of Chemistry and Applied Biosciences at ETH Zurich

The Awardee

*«We are looking for quantum materials for the technological future»**



Prof. Dr. Fabian von Rohr is being awarded the Ruzicka Prize 2021 for his work on the discovery of quantum materials by combining chemical and physical design principles. Quantum materials are substances that display emergent collective quantum phenomena, such as superconductivity or magnetic ordering. They represent critical building blocks for future technologies, yet they are difficult to discover, synthesize, and characterize. To meet these challenges, electronic calculations, crystallographic knowledge, physical measurement methods and chemical intuition are essential. Fabian von Rohr has combined all of these into a holistic, interdisciplinary design concept: with his group, he is identifying functional materials by understanding the interplay between composition, structure, and properties. In this way, he has discovered, for example, a new structure of germanium-selenium (β -GeSe), whose layered structure allows for great chemical variability, and he was able to show through the discovery of the superconductor $\text{Nb}_4\text{Rh}_2\text{C}_{1-6}$ that the violation of the Pauli limit cannot always be used as an

indicator for an unconventional superconductor. The goal of his research is to discover the most exciting materials and to thereby make them available for future applications.

Fabian von Rohr (*1984) originates from Olten, Solothurn. He studied Interdisciplinary Sciences at ETH Zurich and completed his Master's thesis in solid-state chemistry in the group of Robert J. Cava at Princeton University, USA. In 2014, he completed his PhD on superconductivity in the vicinity of phase boundaries in the laboratories of Reinhard Nesper, ETH Zurich, and Andreas Schilling, University of Zurich (UZH). This was followed by postdoctoral positions at LMU Munich and at Princeton University, USA. In 2017, Fabian von Rohr became a group leader and SNSF Ambizione fellow at UZH. Since 2021, he has led his group as an SNSF Eccellenza Professor at the Department of Chemistry at UZH. In 2022, he will move to the Department of Quantum Matter Physics at the University of Geneva for a position as Associate Professor.