

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 Gilmour, 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	2022	Athina Anastasaki, ETH Zurich



Ruzicka-Prize 2022
 Prof. Dr. Athina Anastasaki

Constructing and Deconstructing
 Polymers made by Controlled
 Radical Polymerization

December 19, 2022, 5–6 pm
 HCI, G3, Hönggerberg

Prof. Dr. Erick M. Carreira – Welcome
 Prof. Dr. Nicola Spaldin – Laudatio
 Prof. Dr. Athina Anastasaki – Lecture
 Dr. Olivier Haefliger – Ceremony



sponsored by

The Ruzicka Prize

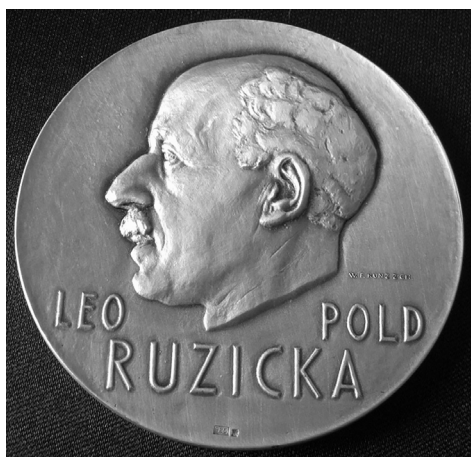
The annually awarded Ruzicka Prize, named after ETH professor and Nobel laureate Leopold Ruzicka, is considered one of the most important awards for the promotion of young scientists in the field of chemistry in Switzerland.

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.

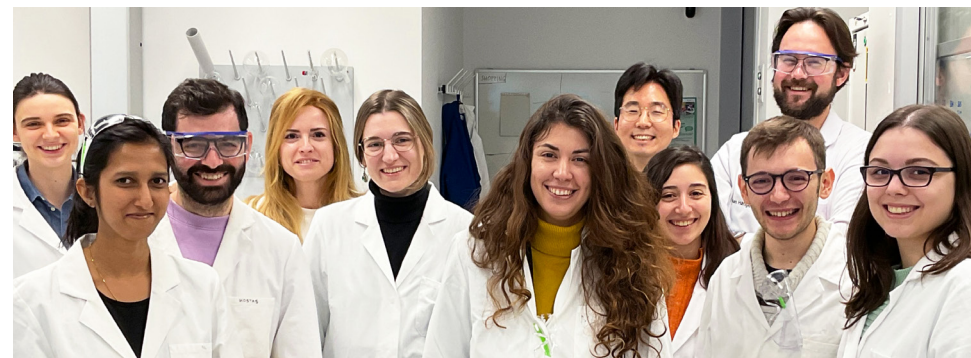
As an instrument for promoting young researchers, the Ruzicka Prize has been extraordinarily successful: since it was first awarded in 1957, the board of trustees has discovered several talented researchers. Many of those who were private lecturers, group leaders or assistant professors when they received 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. Erick M. Carreira
Head of the Department of Chemistry and
Applied Biosciences at ETH Zurich

The Awardee

*«All discoveries are inspired by something. We didn't invent this agent, it was previously used to polymerize monomers of different reactivity. Our idea was: can we use it within the same polymer class to control dispersity?»**



Prof. Dr. Athina Anastasaki has been awarded the Ruzicka Prize 2022 for her work on constructing and deconstructing polymers made by controlled radical polymerization.

Everyday plastics are composed of long chains of molecules. Using polymer chemistry, these chains are assembled from small molecular building blocks (monomers). Producing polymer materials with specific properties, however, requires polymers of different length and uniformity, the latter is measured by the dispersity. Anastasaki and her team developed approaches that allow them to control the dispersity of polymer materials. In doing so, they disproved the common misconception that polymers of high dispersity are of limited use. Anastasaki also used switchable RAFT agents to control both the dispersity and sequence of complex polymers, but these agents are currently too expensive for industrial use. Therefore, Athina Anastasaki and her team have developed a method to deconstruct polymers, regenerating both the starting monomers and the RAFT agents without loss of quality. This method makes cost-saving chemical recycling

possible, a step needed for polymer chemistry to move towards a more circular economy. Her goal is now to improve the method and apply it to different polymer classes.

Athina Anastasaki (*1988) was born in Athens, Greece. As an undergraduate at the University of Athens, she began research in polymer chemistry under the supervision of Prof. Marinos Pitsikalis, with whom she had her first publication. Athina Anastasaki did her PhD at the University at Warwick, U.K., supervised by Prof. Dave Haddleton and graduated in 2014 with the Jon Weaver Award for the best PhD in Polymer Chemistry in the UK. In 2015, she accepted a Monash-Warwick research fellow position, supervised by Prof. Thomas Davis and Prof. Dave Haddleton. She received an Elings Fellowship, followed by a Global Marie Curie Fellowship, to conduct research with Prof. Craig Hawker at the University of California, Santa Barbara. In January 2019, Athina Anastasaki joined the Department of Materials at ETH as an Assistant Professor.

* Quote: Athina Anastasaki