

Dynamic Self-Assembly, Complexity, and Emergence[§]

George M. Whitesides*
Paracelsus Prize Winner 2004

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George M. Whitesides

Georg Fráter

Laudatio

presented by Prof. Dr. Georg Fráter, President of the SCS:

George M. Whitesides' research is truly multidisciplinary and its combination of fundamental and applied science is the basis for numerous innovative applications in the area of industrial chemistry, life sciences, and surface and material sciences. He developed self-assembled monomers (SAMs) and has used them in studies ranging from wetting to assays for drugs based on mammalian cells. He and his group have influenced and driven major developments in the area of physical organic chemistry, catalysis, biochemistry, molecular biology, biophysics, material science, surface chemistry, and complexity.

I would say the Paracelsus Prize was given for unexpected questions, unexpected experiments, and the unexpected emerging answers; unexpectedness is surely what keeps science fascinating.

Curriculum

George M. Whitesides was born August 3, 1939 in Louisville, KY. He received an A.B. degree from Harvard University in 1960 and a Ph.D. from the California Institute of Technology (with J.D. Roberts) in 1964. He was a member of the faculty of the Massachusetts Institute of Technology from 1963 to 1982. He joined the Department of Chemistry of Harvard University in 1982, and was Department Chairman 1986–9. He is now Mallinckrodt Professor of Chemistry at Harvard University.

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[§]Title of the lecture that followed the presentation of the Paracelsus Prize