

Heinrich Rohrer

1986 NOBEL PRIZE IN PHYSICS

Science, fascination, passion

The engine of scientific progress is the fascination of what has been accomplished and still can be achieved, the devotion to achieve it, the passion to go beyond accepted knowledge, skills, capabilities, and truths, and the satisfaction of unique accomplishments. They are the seminal source of both novelty and discovery, the essence of scientific endeavors. Quite a bit of this scientific spirit got lost in recent decades. Science operates increasingly with financial and recognition incentives, with competition, with claims, with vain promises and assurances, and with other personal promotion schemes. None of them made science and scientists any better, thinking deeper and acting more progressive. Science has to find back to scientific values and believes, to communicate results as an obligation, not for personal or institutional profile, and generally to set and be again the standard of human action. Otherwise we loose the scientific freedom which is still left and the trust of society which we still enjoy. In the context of discussing these critical issues, I would like to express my wishes concerning some grand challenges in Science and Technology on the nm scale. We have to make tomorrow to today while we are thinking about and dreaming of the days after tomorrow.

Heinrich Rohrer was born in Buchs (Switzerland). He received his PhD in experimental physics in 1960 from the Swiss Federal Institute of Technology (ETH-Zurich) with a thesis on superconductivity. After a two-year post-doctorate at Rutgers University, New Jersey (USA), he joined the IBM Zurich Research Laboratory in 1963 as a research staff member. In 1974/75 he spent a sabbatical at the University of California, Santa Barbara. His research interests included, in chronological order, Kondo systems, phase transitions, multicritical phenomena, scanning tunnelling microscopy, and, most recently, nanomechanics. Prof. Rohrer retired from IBM in 1997. For the invention of the scanning tunnelling microscope, Gerd Binnig and Heinrich Rohrer were co-recipient of both the King Faisal Prize and the Hewlett Packard Europhysics Prize in 1984, of the Nobel Prize in Physics of 1986, and of the Cresson Medal of the Franklin Institute in Philadelphia (USA) in 1987. Rohrer is a member of various academies and professional societies and has received honorary degrees from several universities.



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