

First Laureate Applied Research

Project Title: “lab on chip” technology for use in analytical chemistry and applied Biosciences

Researcher: Prof. Andreas MANZ

Country: Switzerland

Field: Chemistry

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Abstract:

Microfluidics or “Lab on a Chip” uses microfabrication technology to manufacture devices with micrometer size channels, valves, chemical reactors and detectors for use in analytical chemistry and clinical diagnostics. Main benefits are related to rapid molecular diffusion, fast separations, fast reactions, small volumes, small instrument size and easy integration of multiple fluidic steps. Examples include chromatography, electrophoresis, immunoassay, polymerase chain reaction and glow discharge optical emission spectroscopy on chip.

Biography:

Andreas Manz studied chemistry at the Swiss Federal Institute of Technology, ETH Zürich, Switzerland and graduated 1986 with a PhD in chemical sensors with the late Prof. Dr. Wilhelm Simon. After a short postdoc stay at Hitachi Ltd., Tokyo, Japan, he was working at Ciba-Geigy (now Novartis) at Basel, Switzerland. In 1995 he followed a call to become a professor at Imperial College, London, United Kingdom. From 2003 to 2008 he was the director on the ISAS, Institute for Analytical Sciences, Dortmund, Germany and since 2009, he is a scientist at KIST Europe and a professor at the Systems Engineering Department of the Saarland University, Saarbrücken, Germany.

