Leopoldina
Nationale Akademie
der Wissenschaften

Curriculum Vitae Professor Dr Nicola Spaldin

Image: Markus Scholz | Leopoldina

Name: **Nicola Spaldin**
Date of birth: **1 March 1969**

Research Priorities: Multiferroics, Materials Theory, Magnetism, Ferroelectricity, Quantum Materials, Superconductivity

Nicola Spaldin is a British chemist and materials researcher. She gained particular recognition for her research into multiferroics, which are simultaneously ferromagnetic and ferroelectric. For her research, she uses a combination of first principles and techniques to better understand the fundamental physical properties of novel materials. The goal of Nicola Spaldin's work is to develop new materials with novel functionalities that might be useful for example for high-efficiency data storage and beyond-silicon microelectronic devices.

Academic and Professional Career

since 2011	Professor of Materials Theory, Department of Materials, Eidgenössische Technische Hochschule (ETH) Zurich, Zurich, Switzerland
2010	Visiting Professor, Department of Physics and Astronomy, Materials Theory Division, Uppsala University, Uppsala, Sweden
2007	Visiting Professor, Department of Materials Science and Engineering, University of California, Berkeley, USA
2006 - 2010	Professor, Materials Department, University of California, Santa Barbara, USA
2003	Visiting Professor, Department of Earth Sciences, University of Cambridge, Cambridge, UK
2002 - 2006	Associate Professor, Materials Department, University of California, Santa Barbara, USA
2000	Visiting Professor, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India

1997 - 2002	Assistant Professor, Materials Department, University of California, Santa Barbara, USA
1996	Postdoctoral Researcher, Applied Physics Department, Yale University, New Haven, USA
1996	PhD in Chemistry, University of California, Berkeley, USA
1991 - 1996	Research Associate, University of California, Berkeley, USA
1991	BA in Natural Sciences, University of Cambridge, Cambridge, UK

Functions in Scientific Societies and Committees

since 2021	Member, Scientific Council, European Research Council (ERC)
2014 - 2018	Director of Studies, Department of Materials, ETH Zurich, Zurich, Switzerland

Project Coordination, Membership in Collaborative Research Projects

since 2019	Synergy Grant, ERC
2007 - 2010	Director, International Center for Material Research, National Science Foundation (NSF), USA
2003 - 2006	Director, Chemical Bonding Center, NSF, USA
2000 - 2005	Director, Integrative Graduate Education and Research Training (IGERT) in Optical Materials, NSF, USA

Honours and Awarded Memberships

2023	Gothenburg Lise Meitner Award, Gothenburg Physics Centre, Gothenburg, Sweden
2022	Europhysics Prize, European Physical Society
2022	Hamburg Prize for Theoretical Physics, Joachim Herz Foundation, Hamburg, Germany
since 2022	Foreign Member, French Académie des sciences, France
since 2022	Foreign Member, Austrian Academy of Sciences, Austria
since 2022	Member, German National Academy of Sciences Leopoldina, Germany
2021	IUPAP Magnetism Award and Néel Medal, International Union of Pure and Applied Physics (IUPAP)
since 2021	Member, Swiss Academy of Engineering Sciences (SATW), Switzerland
2020	2020 Golden Owl Award, ETH Zurich, Zurich, Switzerland

2019	Swiss Science Prize, Marcel Benoist Foundation, Bern, Switzerland
since 2019	Foreign Member, National Academy of Engineering, USA
since 2018	Honorary Fellow, Churchill College Cambridge, Cambridge, UK
since 2017	Fellow, Royal Society, UK
2017	L'Oréal-UNESCO for Women in Science Award, Paris, France
2017	Lise Meitner Lecture, German Physical Society and Austrian Physical Society, Austria
2017	Mid-Career Researcher Award, Materials Research Society, Warrendale, USA
2015	Körber European Science Prize, Körber Foundation, Hamburg, Germany
2012	Rössler Prize, ETH Zurich Foundation, Zurich, Switzerland
since 2011	Fellow, Materials Research Society, Warrendale, USA
2010	James C. McGroddy Prize for New Materials, American Physical Society, USA

Research Priorities

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Nicola Spaldin develops and applies a combination of first principles and phenomenological theoretical and computational techniques to understand and predict the properties of materials with unconventional electronic and magnetic properties. To this end, the materials researcher designs new materials, both for microelectronic applications and for research into fundamental questions in the field of physics.

Nicola Spaldin gained great recognition for her work leading to the development of the class of materials known as multiferroics. This novel class of materials reacts to both magnetic and electrical fields. This is not a naturally occurring combination. These properties make multiferroics promising materials which might, for example, be able to replace silica in computer chips in the future and enable new energy-efficient technologies.