

CURRICULUM VITAE

Nevenko Biškup

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Summary

- Research scientist with PhD in Physics. Expert in atomic resolution electron microscopy and spectroscopy. Investigation of functional materials: magnetism (ferro and antiferro), ferroelectricity, dielectrics, high T_c superconductors.
- Extensive scientific trajectory in prestigious universities and research centers in USA, France, Spain, Austria, Croatia. Scientific collaboration with leading groups from these and other countries (e.g. Italy, Japan). Principal investigator in 2 from 18 research projects in which he has contributed.
- Experience in industry: 2 years in Oxford Instruments. Fluid in English and Spanish, good level of German, mother language Croatian.

Work experience

- 2017- **Universidad Complutense Madrid, Spain.** Professor
- 2014-2016 **Universidad Complutense Madrid, Spain.** Technical staff member, National Center for Electron Microscopy. Director José María González Calbet
- Scanning electron microscopy and transmission electron microscopy (SEM, TEM and STEM). Aberration corrected electron energy-loss spectroscopy (EELS) and energy-dispersive X-ray spectroscopy (EDX). Research of magnetic thin films and superstructures (nanotechnology).
- 2012-2014 **Universidad Complutense Madrid, Spain.** Research Associate. Group leader: Maria Varela
- Scanning electron microscopy and transmission electron microscopy (SEM, TEM and STEM). Aberration corrected electron energy-loss spectroscopy (EELS) and energy-dispersive X-ray spectroscopy (EDX). Research of magnetic thin films and superstructures (nanotechnology).
- 2010-2012 **Oak Ridge National Laboratory, Oak Ridge TN, USA.** Visiting Research Associate. Group leaders: Stephen Pennycook and Maria Varela
- Scanning transmission electron microscopy (STEM). Electron energy-loss spectroscopy (EELS).
- 2004-2010 **Instituto de Ciencia de Materiales de Madrid, Consejo Superior de Investigaciones Científicas, Spain.** Ramon y Cajal Postdoctoral Fellow. Group leader J. L. Martinez
- Magnetization and electrical transport in ferro and antiferromagnets, ferroelectrics and multiferroics in ceramic form, single crystals and thin films.
- 1998-2003 **National High Magnetic Field Laboratory (NHMFL), Tallahassee FL, USA.** Postdoctoral Associate. Group leader James S. Brooks.

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- Material science (superconductors, organic conductors and superconductors, magnetic nanoclusters) in high magnetic fields (up to 45 Tesla) and low temperatures (down to 20 milikelvin). Organic electronics.

Oxford Instruments America Inc., Concord MA, USA. Postdoctoral Associate. Group leader Neil Kalechofsky.

- Research project for magnetic resonance imaging (MRI) for applications in medicine.

1990-1997 **Institut for physics, Zagreb, Croatia.** PhD student, junior research scientist. Group leader: Silvia Tomić.

- Organic superconductores in magnetic fields and at low temperatures.

1 year in **Laboratoire de Physique des Solides, Université Paris-Sud, France**, visiting scientist. Group leader Denis Jerome.

- Organic superconductores at high pressures.

4 months in **Institut für Festkörperphysik, Technische Universität Graz, Austria**, PhD. Student. Group leader Günther Leising.

- High T_c superconductors.

Scientific impact

Number of publications:	75	Researcher ID:	N-2132-2014
H index:	17	Orchid ID:	0000-0003-0309-0737
Average citations per year:	30.90	Average number of citations:	11.95
Contribution on conferences:	50	Orals:	30

[Publications list](#)

Research lines

Advanced electron microscopy techniques, spherical aberration correction, electron energy-loss spectroscopy, analytical electron microscopy.

Magnetism, material science, solid state physics: low-dimensional systems, strongly correlated electrons, complex oxides. Specifically:

- Thin films and heterostructures of ferroelectric, ferromagnetic, magnetoresistive or superconductive materials.
- Magnetism. Dielectric response. Electroresistance.
- Magnetic polarization of noble gas nuclei for use in magnetic resonance imaging.
- Low-dimensional organic metals and superconductors. Charge/spin density waves.

Education

1996. PhD in Physics, condensed matter: University of Zagreb, Croatia

Title: "Single particle and collective electrical transport in Bechgaard salts"

1990. B.S. in Physics: University of Zagreb, Croatia

Title: "Critical currents and their distributions in the superconductor $YBa_2Cu_3O_{7-x}$ "

Other merits

- Participation in 18 international research projects, two of them as principal investigator.
- Referee for scientific journals: Physical Review Letters, Physical Review B, J. of Physics – Condensed Matter, Applied Physics Letters, J. of American Ceramic Society.
- Teaching experience: undergraduate physics. Universidad Complutense, Madrid.
- Laboratory scientific supervisor in Croatia, USA, Spain.