

Curriculum Vitae



Family Name: Masini

First Name: Federico

Address: 2360, Rue Nicolas-Pinel 123, G1V 4G6, Québec, Québec, Canada

E-mail: federico.masini.1@ulaval.ca; federico@inano.dk

Nationality: Italian

Date of Birth: 07/03/1982 (d/m/y)

Gender: Male

Marital Status: Single

Education: Sept.1996-July 2001 Liceo Scientifico Statale A. Roiti, Ferrara

Sept. 2001- July 2004 B. Sc. in Chemistry, Ferrara University 110/110 cum laude

Sept. 2004-October 2006 M. Sc. in Chemistry, Ferrara University 110/110 cum laude

Professional and Research Experience:

March 2004- July 2004 B.Sc. Thesis: “New methods for the elimination of chlorinated pollutants in well waters” (Prof. Achille De Battisti)

June-July 2005: Summer student at Harvard University with Prof. G.M. Whitesides studying electronic conduction of molecules in MIM (metal-insulator-metal) systems with the mercury drop technique and learning the basis of SPR.

October 2005- May 2006 M.Sc.Thesis: “Molecular Electronics. A Study of charge transfer in peptides through Metal-Peptide-Metal junction and Nanofabrication of a new junction” (Prof. Maria A. Rampi)

May-July 2006: Summer student at Harvard University with Prof. G.M. Whitesides studying the fabrication of nanometric crack junctions in order to build a new molecular junction for electron transfer measurements

Feb. 2007-Feb. 2010: PhD in Nanotechnology at iNano, Aarhus University, Denmark

Research Topic: “Chiral induction in molecular surface assemblies and surface functionalization by covalent organic frameworks”

Supervisor: Trolle R. Linderoth

Feb.-April 2010 Postdoctoral fellow at iNano, Aarhus University, Denmark

May 2010-present Postdoctoral fellow at Laval University, Québec, Canada

Attended PhD Courses:

Intermolecular and surface forces

Nano Science

Surface Physics

Solid State Physics IIA

Semiconductor Physics

Publications:

S. Weigelt, J. Schnadt, A.K. Tuxen, F. Masini, C. Bombis, C.W. Busse, C. Isvoranu, E. Ataman, E. Lægsgaard, F. Besenbacher and T.R. Linderoth
“Formation of Trioctylamine from Octylamine on Au(111)”
J. Am. Chem. Soc., **2008**, *130* (16), 5388–5389

M. M. Knudsen, N. Kalashnyk, F. Masini, J. R. Cramer, K. V. Gothelf E., Lægsgaard, F. Besenbacher and T. R. Linderoth
“Controlling chiral organization of molecular rods on Au(111) by molecular design”.
J. Am. Chem. Soc., **2011**, *133* (13), 4896–4905

G. Goubert, V. Demers-Carpentier, F. Masini, Y. Dong and P. H. McBreen
“Weak Interactions in the Assembly of Strongly Chemisorbed Molecules”
Accepted in Chem. Comm.

F. Masini, N. Kalashnyk, M.M. Knudsen, K. V. Gothelf, E. Lægsgaard, F. Besenbacher and T. R. Linderoth
“Chiral seeding in molecular surface assemblies on Au(111) studied by UHV-STM”,
in preparation

F.Masini, S.Klyatskaya, M. Ruben, E. Lægsgaard, F. Besenbacher and T. R. Linderoth
“On-surface Synthesis of Highly Ordered Conjugated Covalent Organic Framework”,
in preparation

F. Masini, Y. Ning, Z. Li, E. Lægsgaard, F. Besenbacher and T. R. Linderoth
“Adsorption structures of the organic salt TAB(HCl)₄ on Cu(111) studied by UHV-STM and XPS”, *in preparation*

Attended Schools

XII National School of Material Science, Brixen, Italy, 11-16 September 2006

"Nanomaterials and Nanosynthesis", Ebeltoft, Denmark, 10-15 June 2007

"The theoretical and experimental foundations of surface science", Berlin, 1- 5 October 2007

iNano Autumn School 2007, Ebeltoft, Denmark, 5-8 October 2007

"Molecular Organization and Function at Surfaces", Ebeltoft, Denmark, 8-12 September 2008

iNano Autumn School 2008, Ebeltoft, Denmark, 10-13 October 2008

Summer School “Reactivity of nanoparticles for more efficient and sustainable energy production”, 22-27 August 2009 at the Sandbjerg Estate, Denmark

Attended Conferences

17 ISSC (17th Interdisciplinary Surface Science Conference) March 30- April 2 2009, Reading, UK

ECOSS 26 30 August - September 4, 2009, Parma, Italy

ACS Fall Meeting Boston, MA August 22-26, 2010

ECOSS 27 Groningen, the Netherlands, August 30- September 3, 2010

Oral Contribution: Chiral seeding in molecular surface assemblies studied by UHV-STM

94th CSC Montreal, 5-9 June, 2011

Oral contribution: Chiral recognition and amplification studied by a combination of STM, DFT and RAIRS

Techniques:

- Variable Temperature STM
- RAIRS, TPD and XPS

Languages

Italian: Mother-tongue

English: Fluent (written/spoken)

French/Danish/German: Beginner (written/spoken)

Outside Interests: Literature, History