

European
curriculum
vitae
format

Personal
information

Name	Biddau, Giulio
Address	calle Mota del Cuervo 35 8F, 28043, Madrid, Spain (permanent) via Monteverdi 12, 09129, Cagliari, Italy
Telephone	Spain: +34 917595024 (home) +34 914978647 (office) +34 652683254 (mobile) Italy: +39 3494753283 (mobile)
Fax	Spain : +34 914974950
E-mail	giulioenrico@gmail.com (personal), biddau@jaist.ac.jp (JAIST, Japan Advanced Institute of Science and Technology), giulio.biddau@uam.es (Universidad Autonoma de Madrid)
Skype and IM	giulioenrico@yahoo.it
Nationality	Italian
Date of birth	15 th , July 1979

Work
experience

- Dates (from – to) October 2008 – December 2008
- Name and address of employer RCIS, Material Science IV, Japan Advanced Institute of Science and Technology (JAIST)
- Type of business or sector Computational Physics of Condensed Matter
- Occupation or position held Visiting Researcher and Research Assistant
- Main activities and responsibilities Synthesis, adsorption, structural and electronical characterization of endohedral fullerenes and hetero fullerenes.

- Dates (from – to) October 2005 –
- Name and address of employer Universidad Autonoma de Madrid (UAM), Condensed Matter Theory Department, module C-V, Science Faculty, Campus of Cantoblanco
C/ Fco. Tomás y Valiente 7, Madrid E-28049-Spain
Computational Physics of Condensed Matter
- Type of business or sector Computational Physics of Condensed Matter
- Occupation or position held PhD student
- Main activities and responsibilities Research on organic – inorganic molecules interaction with metallic surfaces, focusing attention on structural, electronical and mechanical properties, through ab-initio DFT simulation programs, both localized orbitals and plane waves': VASP, CASTEP, FIREBALL, OPENMX. Developing theoretical description of AFM, STM experiment.

Education and training

- Dates (from – to) October 2005 – October 2007
- Name and type of organisation providing education and training Universidad Autonoma de Madrid
- Principal subjects/occupational skills covered Research activity on characterization of molecular adsorption on noble metal surfaces, catalytic process, endohedral and heterofullerenes electronical and mechanical properties, through DFT approach in both plane waves (CASTEP, VASP) and local orbital methods (OpenMx and Fireball).
- Title of qualification awarded Diploma de Estudios Avanzados (Spanish MSc)
- Level in national classification Sobresaliente (Honours)

- Dates (from – to) October 1998 – May 2005
- Name and type of organisation providing education and training University of Cagliari
- Principal subjects/occupational skills covered Research activity on computational physics of surface
Thesis and dissertation on: Influence of mass transport on epitaxial growth of Cu(100) surfaces with and without Indium as surfactant. Related papers to be submitted to journal. Principal subjects: Physics of Surfaces, Physics of Condensed Matter, Computational Physics of Matter,

Physics of Semiconductors, Physics of Superconductors,
Physics of semiconductors-nanodevices

- Title of qualification awarded Bachelor and MSc in Theoretical Physics of Condensed Matter
- Level in national classification 106/110
- Dates (from – to) September 1993 – July 1998
- Name and type of organisation providing education and training Michelangelo High school (Cagliari-Italy)
- Title of qualification awarded Diploma
- Level in national classification 54/60

Scientific Goals

- Awards and Grants European Conference On Surface Science (ECOSS 25): Best Student Talk.
FPI fellowship by Spanish Ministry of Education and Science (MEC)
- Publications During PhD
G. Biddau *et al.*,
Fullerenes from aromatic precursors by surface-catalysed cyclodehydrogenation.
Nature **454**, 865-869 (2008) doi: 10.1038/nature07193
More papers on Polycyclic Aromatic Hydrocarbons adsorption and cyclation processes to be published soon.
More papers on electronical and mechanical properties of azafullerenes to be submitted soon.

From bachelor and Italian MsC:

Colizzi, Biddau and Fiorentini,
Indium on Cu(100) from first principles: Energetics, complex formation, and diffusion of adsorbates and vacancies on terraces and at steps.

Phys. Rev. B **79**, 165441 (2009)

doi: 0.1103/PhysRevB.79.165441

Preprints are available on webpage <http://microbasis.blogspot.com/> where are also available the talk given at ECOSS 2005 and graduation dissertation powerpoint

G. Colizzi, G. Biddau, and V. Fiorentini, "Indium on Cu (100) from first principles: Energetics, interactions, and diffusion of adsorbates, vacancies, and complexes on terraces and at steps", Phys. Rev. B, in print (2009)

Energetics and interaction of native defects and adsorbates on flat and stepped Cu (100), Biddau et al,

Phys. Rev. B. (submitted)

Diffusion of native defects and adsorbates on flat and stepped Cu (100), Biddau et al, Phys. Rev. B. (submitted)

Island density enhancement during growth of Cu (001) due to In-Cu exchange and heteronucleation, Biddau et al, (in preparation)

• Conferences

During PhD:

Talk:

TNT 2009, Barcelona 7th - 11th September 2009

Adsorption and cyclo-dehydrogenation of polycyclic aromatic hydrocarbons on Pt surfaces: Towards the synthesis of heterofullerenes (submitted)

ICMAT09 -IUMRS ICA 2009, Singapore (SG): 28th June - 3rd July 2009 *Atomic Pathways Towards the Synthesis of Fullerenes and Triazafullerenes from Polycyclic Aromatic Hydrocarbons*

DCN09, Lausanne (Switzerland): 11th - 13th May 2009 - *Atomic Pathways Towards the Synthesis of Fullerenes and Triazafullerenes from Polycyclic Aromatic Hydrocarbons*

ECOSS25, Liverpool (UK): 27th July -1st August 2008 *Towards the synthesis of fullerenes: triazafullerene adsorption on noble metal close packed surfaces*

ACSIN9, Tokyo (Japan): 11th-15th December 2007 *Towards the synthesis of fullerenes: triazafullerene adsorption on noble metal close packed surfaces*

Second Fireball Conference 2006, Canary Island (Spain) 17th - 19th December 2006

II International Fireball Workshop, Puerto del Cruz, Tenerife (Spain): 17th -19th December 2006 *Triazafullerene adsorption on noble metal close packed surface*

Poster

ICMAT09 -IUMRS ICA 2009, Singapore (SG): 28th June - 3rd July 2009 *Polycyclic Aromatic Hydrocarbons Adsorption on Noble Metal Close Packed Surfaces: an innovative first step to fullerenes and triazafullerenes*

ICNN09, Lausanne (Switzerland): 13th - 15th May 2009 - *Atomic Pathways Towards the Synthesis of Fullerenes and Triazafullerenes from Polycyclic Aromatic Hydrocarbons*

DCN09, Lausanne (Switzerland): 11th - 13th May 2009 - *Atomic Pathways Towards the Synthesis of Fullerenes and Triazafullerenes from Polycyclic Aromatic Hydrocarbons*

14th International Workshop on Computational Physics and Materials Science: Total Energy and Force Methods, ICPT - Trieste (Italy): 8th - 10th January 2009 *Atomic Pathways Towards the synthesis of fullerenes: triazafullerene adsorption on noble metal close packed surfaces*

FyT2008, Segovia (Spain): 20th - 25th September 2008 *Atomic Pathways Towards the synthesis of fullerenes: triazafullerene adsorption on noble metal close packed surfaces*

Multiscale approaches to Nanomechanics, Lyon (France): 5th - 7th February 2007 *Towards the synthesis of fullerenes: triazafullerene adsorption on noble metal close packed surfaces*

Fuerzas y Tunel 2006, Murcia (Spain): 20th - 22nd

September 2006 *Towards the synthesis of fullerenes from $C_{57}H_{33}N_3$*
ICN+T 2006, Basel (Switzerland): 31st July - 4th 2006
Towards the synthesis of fullerenes from $C_{57}H_{33}N_3$

Organization

1st Multi-frequency AFM Conference: Local Committee - September 2008

KPFM Workshop: Local Committee - September 2008

NC-AFM 2008, Madrid (Spain): Organising Committee - September 2008

Attendance

Castep Workshop, York (UK): 17th - 21st September 2007

During bachelor and Italian MSc:

14th Computational Materials Science (CMS) Workshop, Geremeas (Cagliari) - September 2004

- Visiting periods Visiting researcher and research assistant:
Japan Advanced Institute of Science and Technology - JAIST at RCIS group, from 8th October 2008 to 30th December 2008
- Invited Speaker NIMS, Tsukuba, Ibaraki (Japan) - 15th December 2008
RCIS seminar, JAIST (Japan) - 10th October 2008
IMRE, A-STAR Singapore - 3rd October 2008
Physics Department of Cagliari (Italy) - January 2009
- Additional informations and goals Press interview available at <http://www.panorama.it/edicola/panorama/2008-42-211-56>
Wikipedia page http://en.wikipedia.org/wiki/Giulio_Biddau
Webmaster for NC-AFM 2008 conference <http://www.uam.es/ncafm2008> and SPM-TH group <http://www.uam.es/spmth>
Personal homepage: <http://ww.geocities.com/giulio.biddau>

Personal skills
and
competences

Mother tongue **Italian**

Other languages

English

- Reading skills Excellent
- Writing skills Excellent
- Verbal skills Excellent

Spanish

- Reading skills Good
- Writing skills Good
- Verbal skills Good

Technical skills and competences

Unix-based OS - Linux: Mandriva, Slackware, Suse, Fedora, RedHat, Ubuntu, Mandrake, Xandros; Mac OSX
Windows: Vista, XP, 2000, Millennium, NT, 98, 95, 3.11, 3.1
Packages: Office, OpenOffice, StarOffice
Programming: Fortran (77, 90), HTML, CSS
System Administrator for linux computers, involving NIS, NFS, WEBDAV, SAMBA, VPNC and VNC

Driving licence(s) B

Referees

PhD Thesis Supervisor: prof. Ruben Perez Perez (ruben.perez@uam.es),
Visiting Period referee: prof Taisuke Ozaki (t-ozaki@jaist.ac.jp)
Tutor during graduation thesis: prof. Vincenzo Fiorentini (vincenzo.fiorentini@dsf.unica.it)