Curriculum Vitæ

Personal informations

Name	**Spallanzani Nicola**
Home Address	**Via Cavalieri 17, I-41124 Modena, Italy**
Home Telephone	+39 059 239577
Mobile Telephone	+39 333 2089161
Personal e-mail	nic.spalla@gmail.com
Nationality	Italian
Date of birth	19/May/1978
Work Address	Dip. Fisica, **Via della Ricerca Scientifica 1, I-00133 Roma, Italy**
Work Telephone	+39 06 72594548 or +39 059 2055585
Work e-mail	nic.spalla@gmail.com
Web page	www.nanomodelling.unimore.it

Research activity

My research activity is about *ab initio* simulations of complex systems, and is centered on the investigation of the optical properties an charge dynamics of a set of light-harvesting assemblies. In the course of the Ph.D. thesis I'm interested in first in the photoabsorption process of a supramolecular triad by describing it within the Time-Dependent Density Functional Theory (TDDFT), a method that since its formulation has provided very good results for the optical response of a large set of molecular systems. Afterwards was studied the exciton dissociation and the relative charge transport with real-time ab-initio molecular dynamics methods. Presently the target of my research are hybrid PbS/PbSe nanocrystal-C60 heterojunction assemblies, they also characteristic in third generation solar cells.

Publications:

N. Spallanzani, C. A. Rozzi, D. Varsano, T. Baruah, M. R. Pederson, F. Manghi and A. Rubio,
Photoexcitation of a Light-Harvesting Supramolecular Triad: a Time-Dependent DFT Study,
J. Phys. Chem. B 113 (16), 5345 (2009)

Skills and Competences

Laboratory skills:

Good competences in laboratory of chemistry.

Computer skills:

- Operating System: Unix, Linux, Mac OSX.
- Programming and Scripting: In the course of the master degree thesis and of the Ph.D. school I had the opportunity to learn some programming and scripting languages. My master degree thesis was about upgrading a quantum chemistry code, written in Fortran, introducing latest algoritms for the recursive computation of electronic repulsion integrals. My programming knowledge was increased following summer schools for parallel computation. Using a Linux OS I was able to learn Bash and Perl scripting usefull in particular for manipolate output programs. In addition I'm or I was the developer and administrator of web sites, both for private and work interests, that allowed me to learn HTML, PHP and SQL languages.
- General Software: LaTeX, Emacs, Gnuplot, VMD, OpenDX, etc.

Mother tongue:

Italian

Other languages:

English - reading skills good, writing skills basic, verbal skills basic.

Social skills and competences:	Good disposition towards group work acquired both in the workplace and in accademia. My education and didactical activities experience helped me gain valuable problem solving skills, especially in dealing with students and colleagues.

Education and training

• Date (from - to)	2010-up to now.
• Name and type of organisation providing education and training	University of Rome "Tor Vergata", Department of Physics, Via della Ricerca Scientifica 1, I-00133 Roma, Italy
• Principal subjects/occupational skills covered	Computational Physics — Research title: *Ab-initio computations of electronic and optical properties of complex systems*.
• Title of qualification awarded	Post-doctoral fellow
• Date (from - to)	2007-2009
• Name and type of organisation providing education and training	University of Modena and Reggio Emilia, Department of Physics, INFM-CNR National Research Center S^3, Modena (Italy)
• Principal subjects/occupational skills covered	Computational Physics — Thesis title: *Time Dependent DFT Investigation of Optical Properties and Charge Dynamics in Light-Harvesting Assemblies*.
• Title of qualification awarded	Ph.D. in Nanoscience and Nanotechnology
• Date (from - to)	1997-2006
• Name and type of organisation providing education and training	University of Modena and Reggio Emilia (Italy)
• Principal subjects/occupational skills covered	Theoretical Chemistry — Thesis title: *Algorithms for the recursive computation of electronic repulsion integrals*
• Title of qualification awarded	Master Degree in Chemistry (marks: 100/110)
• Date (from - to)	1992-1997
• Name and type of organisation providing education and training	"*Enrico Fermi*" Technical Institute (Modena, Italy)
• Principal subjects/occupational skills covered	Industrial Chemistry
• Title of qualification awarded	Secondary school diploma

Conferences, workshops, and schools:

• Date	14-19/September/2009
• Name and type of happening	ETSF Workshop on Electronic Excitations
• Location	Evora - Portugal
• Contribution	Oral presentation
• Date	8-12/June/2009
• Name and type of happening	E-MRS Spring Meeting
• Location	Trieste - Italy
• Contribution	Poster exhibition
• Date	2-6/June/2009
• Name and type of happening	NANOQUANTA 6th Young Researchers Meeting
• Location	Berlin - Germany
• Contribution	Oral presentation
• Date	8-10/January/2009
• Name and type of happening	14th International Workshop on Computational Physics and Materials Science: Total Energy and Force Methods
• Location	Trieste - Italy
• Contribution	Poster exhibition

• Date	6-10/October/2008
• Name and type of happening	4^a Scuola Specialistica di Calcolo Parallelo
• Location	CINECA, Casalecchio (BO) - Italy
• Contribution	Partecipant
• Date	25-29/August/2008
• Name and type of happening	22nd General Conference of the Condensed Matter Division of the European Physical Society
• Location	Roma - Italy
• Contribution	Poster exhibition
• Date	20-23/May/2008
• Name and type of happening	NANOQUANTA 5th Young Researchers Meeting
• Location	Modena - Italy
• Contribution	Poster exhibition
• Date	3-14/September/2007
• Name and type of happening	16^a Scuola Estiva di Calcolo Parallelo
• Location	CINECA, Casalecchio (BO) - Italy
• Contribution	Partecipant
• Date	25-31/March/2007
• Name and type of happening	Psi-k Training Graduate School
• Location	Bristol - UK
• Contribution	Partecipant
• Date	December/2008
• Name and type of happening	Introduzione al linguaggio Perl in ambiente UNIX
• Location	CeSIA, Modena - Italy
• Contribution	Partecipant

Didactical activities

• Academic year	2008/2009
• Name and type of organisation providing education and training	University of Modena and Reggio Emilia (Italy)
• Teaching	Physics B (exercise) - Electromagnetism
• Laurea degree course	Informatics Engineering
• Academic year	2008/2009
• Name and type of organisation providing education and training	University of Modena and Reggio Emilia (Italy)
• Teaching	Physics A (exercise) - Classical Mechanics
• Laurea degree course	Informatics Engineering
• Academic year	2007/2008
• Name and type of organisation providing education and training	University of Modena and Reggio Emilia (Italy)
• Teaching	Physics 1 (exercise) - Classical Mechanics and Fluid Dynamics
• Laurea degree course	Chemistry

Work experience

• Date (from - to)	September 2002 – June 2003
• Name and address of employer	Professional Institute "*Fermo Corni*", 3, via Tassoni, 41100, Modena (Italy)
• Type of business or sector	Teaching
• Occupation or position held	Tutor for special needs students
• Main activities and responsibilities	To teach math, computer laboratory and other laboratory activities.

Additional informations

References

• Prof.ssa Franca Manghi
Dipartimento di Fisica
Università degli Studi di Modena e Reggio Emilia
Via Campi 213A, I-41125 Modena, Italy

• Dr. Carlo Andrea Rozzi
Centro S3, CNR-Istituto di Nanoscienze
Via Campi 213A, I-41125, Modena, Italy

• Prof. Stefano Ossicini
Dipartimento di Scienze e Metodi dell'Ingegneria
Università degli Studi di Modena e Reggio Emilia
Via Amendola 2, Padiglione Morselli, I-42100 Reggio Emilia, Italy

• Dr. Elena Degoli
Dipartimento di Scienze e Metodi dell'Ingegneria
Università degli Studi di Modena e Reggio Emilia
Via Amendola 2, Padiglione Morselli, I-42100 Reggio Emilia, Italy

• Dr. Olivia Pulci
Dipartimento di Fisica
Università degli Studi di Roma Tor Vergata
Via della Ricerca Scientifica 1, I-00133 Roma, Italy

Autorizzo il trattamento dei dati personali ai sensi della legge 196/03.

Nicola Spallanzani