

CURRICULUM VITAE LAURA GAGGERO

Nata a Genova il 19 ottobre 1961.

Diploma di maturità classica (1980), laurea in Scienze Geologiche (1986), dottorato di ricerca in Scienze della Terra (1990).

Dal 01/02/1992 Ricercatore Universitario Università degli Studi di Genova

Dal 01/11/2000 Professore II Fascia Università in Petrologia e Petrografia Università degli Studi di Genova

Dal 2018 Professore del Settore Scientifico Disciplinare: GEO/09 - GEORISORSE MINERARIE E APPLICAZIONI MINERALOGICO-PETROGRAFICHE PER L'AMBIENTE E I BENI CULTURALI presso il Dipartimento di Scienze della terra, dell'ambiente e della vita (DISTAV) dell'Università degli Studi di Genova.

Nel 2017 ha conseguito l'Abilitazione Scientifica Nazionale a professore di I fascia.

L'attività scientifica di Laura Gaggero è rivolta a petrologia ignea, metamorfica e alle applicazioni della petrografia all'ambiente e ai Beni Culturali.

Dal novembre 2017 è Coordinatore del Corso di Laurea Magistrale in *Metodologie per la Conservazione e il Restauro dei Beni Culturali*.

Laura Gaggero ha pubblicato oltre 140 articoli di cui 88 articoli ISI indicizzati Scopus e 15 articoli in monografie *peer reviewed* e *proceedings* di conferenze internazionali, 2 prefazioni, 2 brevetti nazionali, 1 brevetto internazionale, 85 abstract a congressi nazionali, 116 a congressi internazionali, 1 mostra, 25 carte geologiche e 20 guide geologiche e di *field trip* di congresso.

Ha organizzato o partecipato come relatore a convegni di carattere scientifico in Italia o all'estero.

Ha partecipato alle / diretto le attività di gruppi di ricerca caratterizzate da collaborazioni a livello nazionale o internazionale.

- dal 1990 a oggi: Collaborazione nazionale e internazionale su Geologia, Geodinamica, Petrogenesi, Datazioni radiometriche del Paleozoico inferiore.
- dal 1991 a oggi: ricerche in Geoscienze per i Beni Culturali e Archeologici
- dal 1992 a oggi Collaborazione nazionale e internazionale su Geologia, Geodinamica, Petrogenesi, Datazioni radiometriche del Paleozoico superiore.
- Componente del GLOM, Gruppo di Lavoro sulle Ofioliti Mediterranee.
- dal 1992 a oggi. Nel 1990, 1992, 1993, 1995 campagne di rilevamento sulle ofioliti di Albania, nell'ambito del CNR bilateral project Italy Albania (durata 1993-1995).
- dal 1993 al 1994 ha partecipato come membro dello Shipboard Scientific Party Leg 153 all'Ocean Drilling Program Leg 153 (1993), perforando la crosta oceanica in corrispondenza della Kane Transform, 23°N.
- dal 1994 a oggi svolge ricerche in Biomineralogia.
- dal 1995 al 2000: Collaborazione all'interno del consorzio Europrobe Uralides (Spagna, Germania, Svezia, Italia, Russia). Ha svolto campagne di rilevamento sulle ofioliti degli Urali meridionali (progetto EUROPROBE - Uralides, European Science Foundation, Coordinatore nazionale Piera Spadea 1993, 1995).
- dal 1999 al 2004: (programma bilaterale CNR – BAN - Accademia Bulgara delle Scienze, Coordinatore nazionale G. Cassinis) e campagne di rilevamento (2001, 2003) nell'orogene Balcanico.
- PROJECT MANAGER del progetto europeo LIFE+ Life 12 ENV/IT/000295 FIBERS "Fibers Innovative Burning and Re-use by SHS"
- dal 2014 al 2019 Componente e coautore del progetto CARTO Ti Atlante Geologico della Svizzera, Foglio 1373 Mendrisio, per rilevamento e interpretazione delle vulcaniti Permiane
- dal 2015 a oggi: Componente del Comitato di Gestione del "Centro interdipartimentale di ricerca e innovazione tecnologica per la riduzione, il recupero e il riuso dei rifiuti" – RIT4Waste.
- dal 2016 a oggi: Componente dello EUROPEAN INNOVATION PARTNERSHIP (EIP) on Raw Materials "Building a harmonized European database on natural stones for the use of construction and restoration stakeholders". Coordinatore: Prof. Dolores Pereira (Salamanca).

E' stata Responsabile scientifico di **progetti di ricerca internazionali e nazionali**,

- PRIN COFIN 2004-2006 - 24 mesi - Coordinatore Nazionale e Responsabile di Unità

locale.

Evoluzione dei terreni gondwaniani e perigondwaniani nelle Variscidi delle Alpi Centro-Occidentali e del Massiccio Sardo-Corso.

dal 01-06-2005 al 31-12-2006

- CNR (Short term mobility) - 24 mesi - Responsabile scientifico.

Rilevamento e campionamento del dike swarm di El Jbilets e delle vulcaniti del bacino Permiano di Khenifra.

dal 01-01-2006 al 31-12-2007

- Progetti di Ricerca di Ateneo - (Università di Genova) - 12 mesi - Responsabile scientifico.

Petrogenesi rock-, melt- e fluid-dominated nella litosfera della Tetide ligure giurassica.

dal 01-01-2007 al 31-12-2007

- Progetti di Ricerca di Ateneo - (Università di Genova) - 12 mesi - Responsabile scientifico.

Processi magmatici e metamorfici nella litosfera oceanica attuale e fossile in estensione.

dal 01-01-2008 al 31-12-2008

- PRIN COFIN 2008-2010 - 24 mesi - Responsabile Unità locale.

Dal Gondwana alla Mesoeuropa. Evidenze petrologiche nella ricostruzione geodinamica delle Variscidi Meridionali (Sardegna, Alpi orientali e liguri). Coordinatore Nazionale Giacomo Oggiano.

dal 01-01-2008 al 31-12-2010

- Fondazione CARIGE. Responsabile scientifico.

Nuovo sistema operativo ed interfaccia Microscopio Elettronico Tescan MicVega 3 LMU a pressione Variabile e Microanalisi TEAM EDS System con APOLLO X SDD.

dal 01-06-2010 al 01-01-2011

- Progetti di Ricerca di Ateneo per il Trasferimento Tecnologico (PRATT - Università di Genova) -
- 12 mesi - Responsabile scientifico.

Inertizzazione di fibre di amianto mediante applicazione innovativa di sintesi combustiva SHS.

dal 01-01-2012 al 01-01-2013

- Progetti di Ricerca di Ateneo - (Università di Genova) - 12 mesi - Responsabile scientifico.

Petrogenesi, evoluzione geodinamica e implicazioni ambientali in litosfera oceanica.

dal 01-01-2013 al 01-01-2014

- 2013-2016: Bando LIFE + 2012 - 36 mesi - Project manager

LIFE12 ENV/IT/000295 FIBERS INNOVATIVE BURNING AND REUSE BY SHS (2013-2016).

- Fondazione CARIGE 2018. Responsabile scientifico. Assegno di Ricerca Area Scientifica per il progetto "Impronta chimica e tessiturale delle rocce naturali usate nelle costruzioni e nel restauro / Chemical and textural fingerprint of natural stones for the use of construction and restoration stakeholders".
- Bando Ateneo Grandi e Intermedie Attrezzature 2018. Responsabile scientifico. Progetto "Spettrometro a Fluorescenza a raggi X portatile dotato di Detector Silicon Drift (SDD) su grande area ELIO di XG Lab"

- Bando Ateneo Grandi e Intermedie Attrezzature 2019. Responsabile scientifico. Progetto "OSIRIS Camera for Infrared Reflectography"

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- Dal 1992 : Referee di riviste internazionali di Scienze della Terra (*Journal of Metamorphic Geology, European Journal of Mineralogy, Lithos, Italian Journal of Earth Sciences, Environmental Earth Sciences, Journal of the Geological Society of London, Neues Jahrbuch für Geologie und Paläontologie, Journal of Marine Systems, Gondwana Research, Journal of Petrology, International Journal of Earth Sciences, Tectonophysics, Ofioliti, Periodico di Mineralogia, Canadian Mineralogist, Iberian Journal of Earth Sciences, Rendiconti online Società Geologica Italiana, Journal of Cultural Heritage, Geoscience Frontiers, Journal of Environmental Management Journal of Brazilian Chemical Society, Construction and Building Materials, Minerals*).
- Guest editor di 2 volumi speciali

Partecipazione al collegio dei docenti ovvero attribuzione di incarichi di insegnamento, nell'ambito di dottorati di ricerca accreditati dal Ministero

- Dal 1995: Supervisor / co-supervisor di 7 tesi svolte nel Dottorato di Scienze della Terra o

nella Scuola di Dottorato STAT di UNIGE (1 European PhD; 1 tesi in co-tutela Italia Francia).

- Supervisor / co-supervisor di 3 tesi svolte nei Dottorati di Scienze della Terra delle Università di Pavia e Firenze.
- Co-supervisor 1 tesi svolta nel Dottorato di Scienze Geologiche dell'Université de Marrakech (Marocco).
- 2006-2014 Componente del Collegio dei Docenti XXII – XXIX Ciclo di Dottorato in Scienze della Terra
- Dal 2014: Componente del Collegio dei Docenti XXX – XXXII Ciclo di Dottorato in Scienze e Tecnologie per l'Ambiente e il Territorio (STAT)
- Dal 1997 : Referente di convenzioni Erasmus ed Erasmus +

Conseguimento di premi e riconoscimenti per l'attività scientifica, inclusa l'affiliazione ad accademie di riconosciuto prestigio nel settore

- Premio SGI 2008 all'articolo Cassinis G., Cortesogno L., Gaggero L., Perotti C.R. & Buzzi L. "Permian to Triassic geodynamic and magmatic evolution of the Brescian Prealps (eastern Lombardy, Italy)", Boll. Soc. Geol. It 127-2008 (3).
- 2014 – 2018 Consigliere nel Consiglio di Presidenza della Società Italiana di Mineralogia e Petrologia (SIMP).

Risultati ottenuti nel trasferimento tecnologico (Brevetti, allestimento laboratori, ricerca e sviluppo)

1. Gaggero L., Ferretti M., Belfortini C., Isola E., 2010 METODO E APPARATO PER L'INERTIZZAZIONE DI FIBRE DI AMIANTO. Brevetto italiano n. GE2010A000032
2. Maurizio Ferretti, Laura Gaggero, Giulia Torrielli 2014 Apparato e metodo per il trattamento di materiali porosi. Brevetto Italiano GE2014A000065
3. Maurizio Ferretti, Laura Gaggero, Giulia Torrielli 2015 Apparatus and method for treating porous materials. Brevetto internazionale PCT/IB2015/055129

LIFE12 ENV/IT/000295 FIBERS INNOVATIVE BURNING AND REUSE BY SHS, FIBERS.

Ruolo: Project Manager dal 01-07-2013 al 30-06-2016

Dal 2005: Responsabile LABORATORIO NAZIONALE Responsabile del *Laboratorio di Analisi delle proprietà microstrutturali, chimiche e fisiche dei materiali inorganici; determinazioni qualitative e quantitative della composizione mineralogica di materiali naturali e delle proprietà tecniche di materiali litici (DIPTERIS)*, accreditato Albo Laboratori del MIUR.

Dal 2011: Responsabile del Laboratorio di Microscopia Elettronica del Dipartimento per lo Studio del Territorio e delle sue Risorse (DIPTERIS), successivamente Dipartimento di Scienze della Terra, dell'Ambiente e della Vita (DISTAV), dal 2016, inserito tra le INFRASTRUTTURA DI RICERCA della REGIONE LIGURIA.

2011-2013: Delegato della Società Italiana di Mineralogia e Petrologia presso UNI mirror group (Pavimenti lapidei) del CEN TC 246 (Natural stone test methods).

2011-2013 Componente Working Groups 1 e 2 del CEN Technical Committee 246 (Natural stone test methods),

Dal 2011: Responsabile scientifico di LABORATORIO NAZIONALE. Accreditamento da parte del Ministero della Salute del Laboratorio di *Analisi delle proprietà microstrutturali, chimiche e fisiche*

dei materiali inorganici; determinazioni qualitative e quantitative della composizione mineralogica di materiali naturali e delle proprietà tecniche di materiali litici (DIPTERIS), allo svolgimento di attività analitiche MOCF in massa, SEM e DRX su materiali contenuti amianto, a seguito di adesione al circuito nazionale di test interlaboratori.

Responsabile scientifico di contratti e convenzioni su geomateriali e sul monitoraggio amianto aerodisperso e in materiali massivi.

In fede,
Laura Gaggero



SHORT CURRICULUM VITAE

Dario Cavallo



Education and working experiences

Dario Cavallo graduated in Industrial Chemistry (cum Laude) at the University of Genova in 2007. Afterwards he achieved the Ph.D. title in Chemical Sciences from the same University in 2011, under the supervision of Prof. Giovanni C. Alfonso. The title of the Ph.D. dissertation was “Polymer structuring under processing-relevant conditions” and the related research was accomplished also during a visiting period of one year at the Polymer Technology group of the Eindhoven University of Technology (The Netherlands). After the achievement of the Ph.D., he spent five months (March-July 2011) as a post-doc researcher in Madrid (Spain) at the Institute of Polymer Science and Technology (ICTP-CSIC), applying infrared spectroscopy to polymorphic semicrystalline polymers. Subsequently he was employed in another post-doc position at the Eindhoven University of Technology (TU/e), between September 2011 and June 2013, conducting research on structure-properties relationship in semicrystalline polymers for the Dutch Polymer Institute. Since July 2013 he became Assistant Professor of Industrial Chemistry at the Department of Chemistry and Industrial Chemistry of the University of Genoa. Since March 2017 he holds the National Scientific Habilitation from the Italian Ministry of Education, University and Research for the position of Associate Professor in Industrial Chemistry.

Research interests

The research activity of Dario Cavallo is mainly focused on structuring processes of semicrystalline polymers. Particular attention is paid to polymer solidification in complex external conditions, to the correlation between molecular features and crystallization behavior and to the establishment of structure-properties relationships.

Typical complex conditions are those encountered during polymer processing, where the polymer melt solidifies under the simultaneous application of shear or elongational flow fields and high cooling rates. In particular, he has given relevant contributions to the topic of polymer crystallization under high cooling rates. More recently, this research line has evolved in the study of polymer crystallization during Fused Deposition Modeling (3D- printing).

In collaborations with Gerrit Peters and Leon Govaert (Eindhoven University of Technology), Dario Cavallo has investigated the relationship between the structure of semicrystalline polymers, obtained in different crystallization conditions, and their mechanical performance. Finally, a recent interest of Dario Cavallo is the effect of heterogeneous surfaces in the primary nucleation step of the crystallization process. This include nucleation on designed industrial polymer additives (i.e., nucleating agents), nucleation of one polymorph on another structure of the same material (cross-nucleation), as well as nucleation on fiber’s surfaces in polymer/fiber composites.

Publications

The results of his research have been published in about 70 scientific publications since 2010, including articles in the major peer-reviewed international journals of polymer science and 4 invited book chapters. He has actively contributed to international polymer conferences, with more than 70 oral or poster contribution (as main or co-author) since 2008. Among these, he delivered **15 invited lectures** in conferences. He has achieved a total of more than 1100 citations and an *h-index* of 21 (Scopus, December 2019).

Scopus Author ID: 24832907800

ResearcherID: G-6012-2012

Editorial activity

The appreciation of his achievements in this research field is testified by the membership to the Editorial Advisory Board of the journal “Polymer Crystallization” (Wiley) and of the International Editorial Board of the “Chinese Journal of Polymer Science” (Elsevier). He also frequently serves as reviewer for major international scientific journals on polymer science, among which *Macromolecules* (ACS), *Polymer*, *European Polymer Journal* (Elsevier), and many others.

Moreover, he has organized four International Workshops on “Polymer Crystallization Under Conditions Relevant to Processing” (27-28 May 2010, 21-22 June 2012) and on “Recent advances and new perspectives in polymer crystallization” (29-30 September 2014), “Polymer Crystallization” (3-5 September 2018) held in Genova (Italy) and attended by many academic and industrial researchers.

Teaching and tutoring activity

Since 2014 he teaches the course of “Laboratory of Polymeric Materials” for the Master Degree in Material Science and Engineering. Dario Cavallo has supervised the theses of more than 20 Bachelor and Master students of Chemistry, Industrial Chemistry and Material Science. Moreover, he is currently the supervisor of 4 Ph.D. students, doing research on semicrystalline polymers and blends.

On-going research collaborations

- Alejandro Muller (POLYMAT / University of the Basque Country, San Sebastian, Spain)
- Renè Androsch (Martin-Luther University Halle-Wittenberg, Germany)
- Claire McIlroy (University of Lincoln, UK)
- Gerrit Peters (Eindhoven University of Technology, The Netherlands)
- Duijin Wang (Chinese Academy of Sciences, Beijing, China)
- Luigi Balzano (DSM, Geleen, The Netherlands),
- Davide Tranchida (Borealis Polyolefine, Linz, Austria)

Scientific projects

- 2020-2024: Research Unit leader (for the University of Genova) in the MSCA-H2020 ITN-EID project of the European Research Council “REPOL – Characterization, compatibilization, processing and properties of REcycled POLyolefins”
- 2019-2020: Co-applicant for Royal Exchange Scheme (RES) Grant in the project “Flexible vs. stiff polymers for 3D printing: understanding crystallization for enhanced properties”, together with Dr. Claire McIlroy (University of Nottingham)
- 2018-2021: Project leader for “PROFIT – augment the macroscopic PROPERTIES of i-PP composites by controlling the microscopic Fiber-matrix Interactions via Transcrystallization” funded by the Dutch Polymer Institute (DPI 2.0) – Polyolefins Technology area
- 2018-2021: Research Unit leader (for the University of Genova) in the MSCA-H2020 RISE project of the European Research Council “BIODEST – Synthesis, characterization, structure and properties of novel BIODEgradable POLyesters”
- 2008-2018: Main or co-proposer of more than 40 research grants for the access to synchrotron facilities at DESY (Germany), ESRF (France), SOLEIL (France)

Curriculum Vitae et Studiorum

1. Personal Data

Name	Davide Peddis
Place and date of birth	Cagliari, 18 February, 1976
Home Address	Via M. Sacchi 2 16131, Genova, (GE), Italy <u>Private Mobile</u> +39 347 7728174
Office Address	Dipartimento di Chimica e Chimica Industriale (DCCI) Università di Genova Via Dodecaneso, 31 16146 Genova (GE) <i>TEL. +39 0103538705</i> <i>FAX. +39 178 2280209</i> Istituto di Struttura della Materia (ISM) Consiglio Nazionale delle Ricerche Via Salaria Km. 29.300 00015 Monteorondo (RM) <i>TEL. +39 06 21128843</i> <i>FAX. +39 178 2280209</i>
e-mails	davide.peddis@gmail.com ; davide.peddis@cnr.it ; davide.peddis@unige.it
Nationality	Italian
Actual position	Associate Professor of Physical chemistry at Dipartimento di Chimica e Chimica Industriale (DCCI), Università di Genova; Associate Resercher at CNR-ISM

2. Appointments

01/12/12 –present	Associate Professor of Physcal Chemistry at Dipartimento di Chimica e Chimica Industriale, Università di Genova
14/12/15 –28/02/2017	Senior Scientist at Vinca Institute, University of Belgrade, Belgrade, Serbia
01/06/12-30/11/2018	TD Researcher at Institute of Structure of Matter - Magnetism Laboratory
30/05/10-31/05/12	Research fellow granted by Regione Autonoma della Sardegna (L.R. 7/2007)at Cagliari University - Chemistry Department [protcollo: CRP1_256] Project: Superparamagnetism in nanostructured spinel oxide

- 30/03/09 – 29/05/10 Post Doctoral researcher granted by Associazione Universitaria del Sulcis Iglesiente (AUSI) at Cagliari University - Chemistry Department (Reference: Prof. G. Piccaluga)
- 01/10/08 – 29/03/09 Post Doctoral Researcher granted by EU project TERABIT MAGNETIC STORAGE TECHNOLOGIES (TERAMAGSTOR) at Institute of structure of Matter - Magnetism Laboratory (reference: Dr. D. Fiorani)
- 01/10/07 – 30/09/08 Post Doctoral Researcher granted by Regione Autonoma Della Sardegna (Master & Back program) at Institute of structure of Matter - Magnetism Laboratory (Mentor: Dr. D. Fiorani).
- 01/10/06 – 29/09/07 Post Doctoral researcher granted by Associazione Universitaria del Sulcis Iglesiente (AUSI) at Cagliari University - Chemistry Department and Chemistry lecturer within Material Science Degree (Mentor: Prof. G. Piccaluga)

3. Education

- Dec 2014 Abilitazione Prof. Seconda fascia Modelli e Metodologie Per le scienze chimiche (settore concorsuale 03/A2 evaluation of committee: good) (N. Procollo 00002003/2016)
- Oct 2014 Abilitazione Prof. Seconda fascia Fisica Sperimentale della Materia (settore concorsuale 02/B1; evaluation of committee: excellent; VN 37.95) (N. Procollo 00002004/2016)
- Jan. 2007 PhD in Physical Chemistry at the university of Cagliari
Thesis: Nanostructured Magnets--Synthesis and characterization of CoFe₂O₄ nanoparticles
- Dec. 2003 Degree in Physical Chemistry (laurea) cum laude, at the University of Cagliari
Thesis: Synthesis by sol-gel autocombustion method and magnetic, structural characterization of nanostructured materials.

4. Training and courses

- Dec. 2004 Radio-protection course, Physic Department of University of Cagliari, December 16-17 2004, Cagliari, Italy
- June 2005 International School “Nanomagnetism&Spintronics”, May 23- June 4 2005 Cargese, Corsica (two weeks)
- Sept. 2004 X National school of materials science, September 27-October 8 2004, Sestri Levante, Italy (two weeks)

Publications and citational profile

99 papers in the period 2006-2018 (30 as first and/or last and/or corresponding author) , 5 book chapter (4 as main author)

Citational profile (updated to 13/01/20202)

Google Scholar (number of citation 2595; h- index : 29)

Scopus (number of citation 2025; h- index : 27)

ISI web (number of citation 2025; h- index : 26)

Scientific Communication (Talks, seminars, lectures)

Co author of Over 200 scientific communication

52 Invited talks personally given (19 invited talk to National and International Conferences, 25 invited talks in International Institution, 2 invited lecture to International School)

25 oral communication personally given

34 poster communication personally given

Participation of Projects

-) 2019-2021, Educational project granted by EIT Raw Materials, *Tracing and learning from ancient materials and mining technologies (Mine Heritage)*; Role: **Coordinator of the CNR Unit** [Total Budget ~ 600 Keuro; CNR budget:~ 90 Keuro]
-) 2017-2019 Bilateral Agreement CNR (Italy) – Romania, Academy (Romania) Advanced ferrofluid for theranostic application [Ferro-Thera] Role: **Coordinator of the Italian Unit** [CNR budget: ~15 Keuro]
-)2017-2020: FET-Proactive Project, MAGnetic nanoparticle based liquid ENergy materials for Thermoelectric device Applications: **Role: Coordinator of CNR unit** [Total Budget ~5 million of euro; CNR buge: ~730 Keuro]
-)2014–2015: Bilateral Agreement Italia-Brasile (CNR-CNPq) **Role: Team Member** (Ref. C. Sangregorio) Hibrid magnetic nanoparticles for biomedical applications
-) 2013-2015 Bilateral Agreements Italia Argentina (CNR CONICET) **Role: Team Member** (Ref. E. Agostinelli)
-) 2012-2015 FIRB (NANOEST) **Role: Team member** (Ref. Sara Laureti)
-) 2012-2015 IRSES (NANOMAG): **Role: Member Team** (Ref. G. Papavasiliou)
-)2010-2012 Regional project (Regione Autonoma della Sardegna, L.R. 7 /2007) SuperNano **Role:Coordinator and principal Investigator** (Ref.: D. Peddis) [Bidget 70 Keuro]
-)2008-2011 – EU- ICT Project (TERAMAGSTORE) Role:Member Team (Ref. D. Niarchos)
-)2005-2008 NMP (NANOSPIN) Role: Member Team (Ref. C. Binns)

Significant International experience

2017-2018: Guest Researcher at Uppsala University (Wenner Gren Fellowship)

2015-2017[14 Month] Senior Scientist at Vinca Institute, Belgrade, Serbia

2015 Visiting researcher [One Month] in Department of Engineering Sciences, Ångström laboratory Uppsala, Sweden (granted by TO-BE COST action)

2014 Visiting Researcher[three weeks] at Physics Department of Universidad Federal de Rio de Janeiro, Granted by Bilateral Agreement CNR -CNRPQ

2014 Visiting Researcher[three weeks] at Chemistry Department of NTNU, Trondheim, Norway, Granted by Short Term Mobility Program

2013 Visiting Researcher Centro Atomico, San carlos de Bariloche, Argentina [One Moth]

2013 Visiting Researcher at University of Delaware [3 Month]

2011 Extended guest lecturer at Uppsala University (Sweden) [1 Month]

2010 Invited professor at University of Le Mans (France) [1 Month]

2005 Visiting scholar at DTU (Denmark) [10 Month]

Boards and Committees

Co-Chair of the *25th Symposium on metastable, amorphous and nanostructured materials* (ISMANAM 2018), July 2-7, Rome 2018

Co- Chair of the workshop Magnetic Coupling In Nanostructured Materials, (MaCMat 2017), Rome October 23, 24 2017

Chair of the Symposium “Nanostructured Magnetic Materials for biomedical application” at the conference Nanoinnovation 2016, September, 22-23 2016, Rome

Member of the International Advisory Committee of International Conference of Fine Particle Magnetism (ICFPM)

Chair of the Scientific Committee for XI National Conference on Nanophase Materials, Rome, October, 24-26, 2015

Member of the Scientific Committee and Chair of the Symposium “Magnetic nanoparticles” of international Conference of Applied Mineralogy and Advanced Materials, June, 7-12 2015

Member of the Organizing Committee and coordinator of the symposium “Nanoparticles” at X NANO conference 2010, Rome.

Member of the Organizing Committee of the I° Italian National Conference on Magnetism 2009 (Rome) and of the IX National Conference on Nanophase Materials 2009, Cagliari

Scientific Evaluation activity

Referee for various scientific international journals: JACS, MRS, Chemistry of Materials (ACS), ACS Nano, JMMM, JPC, JCP, Nanotech., PRB, JAP, APL, JPCM, JPAD.

Independent Evaluator for Research Project at NCSTE, Kazakhstan and SIIN EU network

Independent Evaluator for Mobility Reserch Project at QN research Infrastructure, EU-Network

Teaching Activity

2018- : Physical Chemistry II + Laboratory for bachelor in Materials science

2016 Course for PhD student, University of Cagliari (2 CFU)

2015 Course for master and PhD student, Uppsala University

2014 Course for Master Students, University of Cagliari (1 CFU)

2014 Course for PhD student, University of Cagliari (2 CFU)

2014 Invited Lecture at Italian School on Magnetic Materials for Energy applications, Parma

2012 Extended guest lecturer at gradSAM21- Uppsala University

2011 Short course in PhD school of “Scienze dell’Ingegneria”, Università Politecnica delle Marche, Italy

2010 short Course for PhD and Master students at University of Cagliari

2010 Invited professor in « Laboratoire de Physique de l'Etat Condensé », Le Mans, France

2007– 2010 Lecturer in regular course of Organic Chemistry for students of Materials Science, University of Cagliari

Dr. Davide Peddis has been appointed by the Faculty of Sciences and Technology at Uppsala University as member of the examining committee at the public defence of Atieh Zamani's doctoral thesis (February 27, 2015) and Henry Stopfel (November 28, 2018)

Scientific supervision

Supervision of Post doc

●) Nikola Knezevic (Vinca Institute, Belgrade Serbia), Ana Mrakovic (Vinca Institute, Belgrade Serbia), Erzsébet Illés (Vinca Institute, Belgrade Serbia)

Co-supervisor of “Resercher in Formation”

●) Dr. B. Aslibeiki took a PhD in Condensed Matter Physics at Isfahan University of Thechnology. He spent 9 month during his PhD (2012) at ISM CNR italy under the supervision of Dr. D. Peddis.

Co-supervisor of Master Students

●) G. Muscas (Master Deegree in Materials Science at University of Cagliari); Thesis title: *Superparamagnetism of nanostructured oxides*

Co-supervisor of PhD Students

●) G. Muscas (PhD in Physics at University of Cagliari); Thesis: *Supermagnetic and Multiferroic Materials*

●) A. Talone (PhD in Physics, University of Roma tre)

●) M. Salvador Fernandez (PhD in Chemistry, Co-Tutel between University of Roma tre and University of Oviedo)

●) Sawssen Slimani (PhD in Chemistry, Co-Tutel between University of Genova and University of Sfax, Tunisia)

Scientific Divulgation

Feb. 2015 Uppsala University, Engineering Department(26/02/2015)[Ref. Dr R. Mathieu]

Invited talk: D. Peddis Design of Magnetic nanoarchitecture

Oct. 2014 National Science Festival, November 4-9, Cagliari (Italy)

Invited Talk: D. Peddis, *L’architettura della Cose*

Chair of the meeting : *Fisici e Chimici in Cucina*, (Prof. A. Varlamov, Prof. E. Sanjust)

Oct. 2012 National Science Festival, November 6-11, Cagliari (Italy)

Invited Talk: D. Peddis, *Nanoscience: A Scientific and cultural Revolution*

Nov. 2011 National Day of Chemistry, November 25-26, Isili (Italy)

Invited Talk: D.Peddis, *Nanomagnets telling us about our history..*

Nov 2011 National Science Festival, November 4-12, Cagliari (Italy)

Invited Participation at the round table: What's life without chemistry?

Dec. 2009 National Day of Material Science, December, 15, University of Cagliari (Italy)

Invited Talk: D.Peddis, *Discovering nanomagnets*

Research Activity

Research activity of Davide Peddis has been developed in the framework of Solid State Physical-Chemistry and Condensed Matter Physics, studying the relationship between physical properties, crystalline structures and morphological features of nanostructured magnetic materials. DP's activity focuses on the design of magnetic nano-hetero-structures (nanoparticles, particles embedded in matrix, core shell structures, hollow nanoparticles, anisometric particles) and the study of their magnetic properties. Particular attention has been devoted to the investigation of fundamental properties of magnetic nanoparticles (static and dynamical properties) with particular interest in materials for applications in biomedicine (MRI, drug delivery, hyperthermia), catalysis, and energy field (permanent magnets, hydrogen production). Specific research topics are briefly outlined in the following:

Synthesis of nanostructured materials

An important part of DP's research activity is focused on the synthesis by chemical methods of magnetic nano-hetero-structures of metals (Fe, Co), metal alloys (FePt, CoFe) and metal oxides (Fe_2O_3 , CoFe_2O_4 , NiO, LaCaMnO_4 ; BaFeO_3). Since 2012 DP has been also involved in the deposition of magnetic thin films (CoFe; CoFe/NiO) by Pulsed Laser Deposition.

Magnetic Properties of nanostructured materials.

DP's activity is mainly devoted to the study of static and dynamical properties of magnetic nano-hetero-structures by AC/DC magnetization measurements and Mössbauer spectroscopy. Particular attention has been devoted to the influence of magnetic interactions on equilibrium and out-of-equilibrium dynamic of magnetization in nano-hetero-structure materials (particles embedded in magnetic and non magnetic matrix; core shell systems).

Magnetic Structure at the nanoscale

Among the relevant features of the size reduction of magnetic particles, the presence of a non-collinear spin structure (spin canting) deserves special attention, as it determines relevant modifications in the magnetic properties. Hence, DP's research activity is also focused on the study of influence of spin canting and, more generally, of surface magnetism on the magnetic properties of the materials. The study of the correlation between spin canting, crystalline and magnetic structure has been also performed for ferrites with spinel structure by Mössbauer spectroscopy under intense magnetic and Neutron Powder Diffraction (NPD).

Interface Magnetism

antiferromagnetic materials (i.e. exchange bias) at the nanoscale (thin films, ferromagnetic particles embedded in antiferromagnetic matrix, core shell particles) In the last years DP focused his attention on interface exchange coupling between Ferro(ferri)magnetic and.)

Scientific skills

*) Extended experience on synthesis of nano-hetero-structures by chemical synthetic strategies: Sol-Gel, autocombustion sol-gel, micellar method, wet impregnation, thermal decomposition of metallorganic precursors. Recently, experience on synthesis of magnetic thin films by Pulsed Laser Deposition has been also acquired.

*) Structural, morphological and textural properties of magnetic nanoparticles and magnetic nanocomposites by X-Ray Diffraction, Neutron Powder Diffraction, Electron Microscopy, FT-IR spectroscopy, Thermal Analysis and N₂-physisorption.

*) Magnetic properties of nanostructures (granular films and magnetic nanoparticles) by AC and DC magnetic measurements (SQUID and VSM magnetometry) and Mössbauer spectroscopy (also under intense magnetic field).