

IL PRESENTE ALLEGATO COSTITUISCE UNO SCHEMA-TIPO, NEL QUALE SONO INDICATE ALCUNE VOCI A MERO TITOLO ESEMPLIFICATIVO, PERTANTO PUO' ESSERE MODIFICATO/INTEGRATO DAL CANDIDATO ADATTANDOLO ALLE PECULIARITÀ DELLA PROPRIA ATTIVITÀ SCIENTIFICO-PROFESSIONALE

ALL. B

Decreto Rettore Università di Roma "La Sapienza" n 1867/2018 del 17/07/2018

Ernesto Placidi Curriculum Vitae

Roma
04/09/2018

Part I – General Information

Full Name	Ernesto Placidi
Spoken Languages	Italian, English

Part II – Education

University graduation in Physics, 110/110

University of Rome Tor Vergata 21/12/1998, defending the thesis: "Studio dei primi stadi di formazione dell'interfaccia Ag/GaAs(001) $\beta_2(2 \times 4)$ mediante microscopia e spettroscopia tunnel"

Supervisor: Prof. N. Motta.

Referee: Dr. A. Cricenti.

PhD in Physics.

University of Rome Tor Vergata 25/03/2003, defending the thesis "HREELS as a probe of surface anisotropy"

Supervisor: Prof. A. Balzarotti.

Referee: Prof. M.G. Betti.

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
04/1999	10/1999	INFN-Tor Vergata unit	Post-graduate grant
11/1999	10/2002	University of Rome Tor Vergata, Physics department	PhD student grant.
11/2002	11/2003	University of Rome Tor Vergata, Physics department	Post Doc grant
12/2003	02/2009	INFN (CNR from 05/2005)	Associate researcher (RTD)
02/2009	Now	CNR	Research scientist (RTI)

IIIB – Other Appointments

Start	End	Institution	Position
05/2004	09/2004	Lincei - Royal Society 2004 grant	Visiting researcher. Electronic Materials Section of the “Centre for Electronic Materials and Devices”, Inorganic Chemistry department, Imperial College, London
01/2012	04/2012	Queensland University of Technology, Brisbane (AU)	Invited Research Fellow.
04/2018	05/2018	Centro de Estudios Avancados de Cuba (CEAC) and Centro de Ingenieria Genetica y Biotecnologia de Cuba (CIGB)	Invited Professor.

Part IV – Teaching experience

Year	Institution	Lecture/Course
1999-2000	University of Rome Tor Vergata, Material Science degree	Tutor for “Material Science” course
1999-2000	University of Rome Tor Vergata, Material Science degree	Tutor for “Structure of the matter” course
2000-2001	University of Rome Tor Vergata, Material Science degree	Tutor for “Structure of the matter” course
2003-2004	University of Rome Tor Vergata, Physics degree	Tutor for “Laboratory of structure of the matter” course
2004-2005	University of Rome Tor Vergata, Material Science degree	Tutor for “General Physics 1 with laboratory experiences”
2005-2006	University of Rome Tor Vergata, Material Science degree	Tutor for “General Physics 1 with laboratory experiments”
2006-2007	University of Rome Tor Vergata, Material Science degree	Tutor for “General Physics 1 with laboratory experiments”
2003-2008	University of Rome Tor Vergata, Physics degree	3 lessons cycle for the course “Physics of surfaces”
2007-2008	University of Rome Tor Vergata, Material Science degree	Lecturer for “Physics Laboratory 1” course (4/4 cfu)
2008-2009	University of Rome Tor Vergata, Physics master degree	Tutor for “Laboratory of structure of the matter” course
2009-2010	University of Rome Tor Vergata, Material Science degree	Lecturer for “Physics Laboratory 1” course (4/4 cfu)
2011-2012	University of Rome Tor Vergata, Physics for Instrumentation and Technology master degree	Lecturer of the course “Epitaxial Growth of Crystals and Nanostructures” (8/8 cfu)
2012-2013	University of Rome Tor Vergata, Physics for Instrumentation and Technology master degree	Lecturer of the course “Epitaxial Growth of Crystals and Nanostructures” (8/8 cfu)
2012	Queensland University of Technology, PhD degree	Lecturer of the course “Solid State Physics fundamentals in Surface Science” (20 hours)
2013-	University of Rome Tor Vergata,	Lecturer of the course “Epitaxial Growth of

2014	Physics for Instrumentation and Technology master degree	Crystals and Nanostructures” (8/8 cfu)
2014	University of Rome Tor Vergata, PhD degree	Lecturer of the course “The growth and physics of nanostructures” (2/2 cfu)
2014-2015	University of Rome Tor Vergata, Physics for Instrumentation and Technology master degree	Lecturer of the course “Epitaxial Growth of Crystals and Nanostructures” (8/8 cfu)
2014-2015	University of Rome Tor Vergata, Material Science master degree	Lecturer for “Microscopies and Nanoscopies” (4/6 cfu)
2014-2015	University of Rome Tor Vergata, Physics for Instrumentation and Technology master degree	Lecturer of the course “Advanced Characterization of Materials: Techniques and Applications” (4/6 cfu)
2015-2016	University of Rome Tor Vergata, Physics for Instrumentation and Technology master degree	Lecturer of the course “Epitaxial Growth of Crystals and Nanostructures” (8/8 cfu)
2015-2016	University of Rome Tor Vergata, Material Science master degree	Lecturer for “Microscopies and Nanoscopies” course (5/6 cfu)
2016-2017	University of Rome Tor Vergata, Physics for Instrumentation and Technology master degree	Lecturer of the course “Epitaxial Growth of Crystals and Nanostructures” (8/8 cfu)
2016-2017	University of Rome Tor Vergata, Material Science master degree	Co-Lecturer for “Microscopies and Nanoscopies” (3/6 cfu)
2016-2017	University of Rome Tor Vergata, Material Science degree	Co-Lecturer for “Science and technology of materials” (1/8 cfu)
2017-2018	University of Rome Tor Vergata, Material Science degree	Lecturer for “Laboratory of experimental physics” (6/10 cfu)
2018	Centro de Estudios Avancados de Cuba (CEAC) and Centro de Ingenieria Genetica y Biotecnologia de Cuba (CIGB)	Lectures on Atomic Force Microscopy. Theory and applications on biological systems.” (96 hours)
2006-now	University of Rome Tor Vergata	Supervisor of 16 undergraduate, master and PhD students
2001-now	University of Rome Tor Vergata	Co-Supervisor of 10 undergraduate, master and PhD students

Part V - Society memberships, Awards and Honors

Year	Title
2004	Lincei-Royal Society grant
2005	Cover page for Appl. Phys. Lett. Volume 86, Issue 24
2005	CNR award “Incentivazione al personale anno 2005”
2001-2009	9 articles selected for Virtual Journal of Nanoscale Science & Technology

2012	Invited Research Fellow in the Queensland University of Technology of Brisbane
2013	Invited Feature Paper on J. Mater. Res., 28, 3201-3209 (2013)
2014	Cover letter for Soft. Matter, Volume 10 Issue 15.
2014-now	Member of editorial board of Advanced Device Materials (Print ISSN 2055-0308, On-line ISSN 2055-0316).
2015	Invited Article on Adv. Dev. Mater. (2015)
2017	Invited review article on Nanoscience and Nanotechnology Letters
2017-now	Affiliated to INFN for the collaboration in VIRGO experiment.
2018	Invited Professor in “Centro de Estudios Avancados de Cuba (CEAC) e Centro de Ingenieria Genetica y Biotecnologia de Cuba (CIGB), Cuba”

Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Title	Program	Grant value
2000-2001	<i>Electronic and Structural properties of GaAs(001) surface</i>	Progetto giovani ricercatori, Università di Roma “Tor Vergata” (PI)	2.000.000 £
2000-2002	Proprieta' elettroniche e strutturali di sistemi III-V confinati realizzati per epitassia da fasci molecolari	PRIN 2000 (I) - prot.: MM02277578_001	370.000.000 £
2002-2004	Growth of semiconductors quantum dots on nanopatterned substrates	PRIN 2002 (I)	177.000 €
2001-2004	FORUM FIB, Fabrication ORganisation and Use of Memories obtained by Focused Ion Beam	FP5 IST-2000-29573 (I)	3.169.919 €
2002-2005	Nanotecnologie e Nanodispositivi per la società dell'informazione.	FIRB 2002 (I)	1.500.000 €
2005-2007	Nucleazione spazialmente controllata di punti quantici per emettitori a singolo fotone	PRIN 2005 (I) - prot.: 2005025173_001	140.000 €
2007-2009	Colmare la distanza tra teoria ed esperimento: verso il controllo della crescita e delle proprietà delle nanostrutture di semiconduttori	PRIN 2007 (I) - prot.: 2007S4FAA4_003	146.100 €
2013-2015	Effetto di filtro di spin delle strutture ibride metalli ferromagnetici/semiconduttori ferromagnetici: verso la misura elettrica e ottica dello spin elettronico.	Progetto Bilaterale CNR-RAS (Russia) (PI)	Nota: Ammesso al finanziamento, ma non finanziato a seguito dello scioglimento della RAS (vedi allegato)
2014-2015	The good and the bad of protein fibrillation – ProFi –	Uncovering the Excellence 2014 (Università di Tor Vergata) (I)	16.900 €
2016-2018	Studio delle leghe III-V contenenti Bi come candidate potenziali per nuovi isolanti topologici tri-dimensionali.	Progetto Bilaterale CNR-CAS (PI)	15.000 €
2016-	<i>GaAs_(1-x)Bi_x aLLoY: a potential</i>	Consolidate the	16.500 €

2017	<i>candidate for Future Photonic Devices – BILLY” –</i>	Foundation 2016 (Università di Tor Vergata) (I)	
2018	Finanziamento CSN2 anno 2018	Fondo INFN -Virgo sez. Tor Vergata 2017 (I)	40.000 €
2018-now	Misure di caratterizzazione elettronica e strutturale mediante microscopia AFM e XPS di derivati grafenici e altri nanomateriali.	Contratto di prestazione di servizi tra Dip. Fisica dell’Università di Roma “Tor Vergata” e Fondazione INUIT (PI)	In base all’entità dei servizi
2018-2021	Boosting Performance of Phase Change Devices by Hetero- and Nano-Structure Material Design - BeforeHands	Horizon 2020. H2020-ICT-2018-2020 Grant Agreement (GA) No: 824957 (I)	3999451.25 €

Part VII – Research Activities

Keywords	Brief Description
Quantum Dots, growth, MBE, semiconductors	From 2001 to 2015 the main research activity has been related to growth and characterization (optical and morphological) especially of III-V semiconductor heterostructures. On this topic, I published more than 30 articles on high IF journals and we obtained many national/international projects.
2D materials, Graphene, fuel cells.	From 2012 I have worked actively on 2D materials characterization, especially graphene (MoS ₂ preliminary experiments have been performed), both from a fundamental and applicative point of view on fuel cells. On this topic, I have published 5 articles on very high IF journals and am responsible of a service provision contract with INUIT foundation.
Phase change materials, Memories	From 2017 I started working on characterization of phase change materials based on the pseudobinary alloy GeTe-Sb ₂ Te ₃ . We have published one article on this topic and recently won a European project (H2020).
Magnetism, semiconductors.	From 2007 to 2011 I have extensively studied the role of local interaction in III-V diluted magnetic semiconductors (mainly GaMnAs). We have set up the complex growth of these compounds and the magnetic properties were measured by Max Planck Institute in Stuttgart. On this topic, I published 7 articles on high IF journals.
Electronic properties, surfaces, semiconductors.	From 1998 to 2006 I have extensively studied electronic properties of III-V semiconductors by means of several surface sensitive techniques (HREELS, XPS, UPS, ARPES). This topic has been also the subject of my PhD thesis, we published 12 articles on high IF journals and got several projects.
Molecules aggregation, peptides, DNA	From 2009 I opened a collaboration with chemistry department in University of Rome Tor Vergata, for the study of molecules aggregation by means of Atomic Force Microscopy and X-ray Photoemission. I have published 14 articles on these topics and got several projects.

Part VIII – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	75*	Scopus	2000	2018
Papers [national]				
Books [scientific]	3 chapters	Google Scholar (1 on Scopus)	2000	2018
Books [teaching]	3	Google Scholar (1 on Scopus)	2000	2018

*Actually, on Scopus 80 records are present, but 4 are conference proceedings not recognised by ANVUR for the ASN, while one is a double record on Scopus. I list below the ID of these records:

2-s2.0-85038891112

2-s2.0-7744232870

2-s2.0-49149085289

2-s2.0-84907046007

2-s2.0-81855194348

Product type	Number	Data Base	Start	End
Papers [international]	47	Scopus	2008	2018
Papers [national]				
Books [scientific]	3 chapters	Google Scholar (1 on Scopus)	2008	2018
Books [teaching]	3	Google Scholar (1 on Scopus)	2008	2018

On the total career

Related to last 10 years

Total Impact factor	237,6 (average for article=3,1)	173,6 (average for article=3,8)
Total Citations	798 (Scopus)	275 (Scopus)
Average Citations per Product	10,64	5,85
Hirsch (H) index	17	9
Normalized H index*	0.94	0.9

Part IX– Selected Publications for evaluation

- 1) *Coarsening effect on island size scaling: The model case InAs/GaAs(001)*, M. Fanfoni, F. Arciprete, C. Tirabassi, D. Del Gaudio, A. Filabozzi, A. Balzarotti, F. Patella and E. Placidi, Phys. Rev. E **86**, 061605 (2012) (IF₂₀₁₂=2,313; 9 citations on WoS)
- 2) *The Unexpected Role of As in Driving the Selective Growth of InAs Quantum Dots on GaAs*, F. Arciprete, E. Placidi, R. Magri, M. Fanfoni, A. Balzarotti and F. Patella, ACS Nano, **7**, 3868-3875 (2013) (IF₂₀₁₃=12,033; 11 citations on Scopus)
- 3) *Graphene ripples generated by grain boundaries in Highly Ordered Pyrolytic Graphite* A. Capasso, E. Placidi, H.F. Zhan, E. Perfetto, J. M. Bell, Y.T. Gu, N. Motta, Carbon **68**, 330-336 (2014) (IF₂₀₁₄=6,196; 19 citations on Scopus)
- 4) *Lateral ordering determined by a trade-off between morphological and elastic interlayer interactions in InAs/GaAs(001) quantum dots multilayers*, E. Placidi, F. Arciprete, V. Latini, S. Latini, R. Magri, M. Scuderi, G. Nicotra and F. Patella, Appl. Phys. Lett. **105**, 111905 (2014) (IF₂₀₁₄=3,302; 8 citations on Scopus)
- 5) *The transition from 3C SiC(111) to graphene captured by UHV STM*, B. Gupta, E. Placidi, C. Hogan, N. Mishra, F. Iacopi, N. Motta, Carbon **91**, 378-385 (2015) (IF₂₀₁₅=6,198; 8 citations on WoS)

- 6) *Textured Sb₂Te₃ films and GeTe/Sb₂Te₃ superlattices grown on amorphous substrates*, J. E. Boschker, E. Tisbi, E. Placidi, J. Momand, A. Redaelli, B. J. Kooi, F. Arciprete and R. Calarco, *AIP advances* **7**, 015106 (2017). (IF₂₀₁₇=1,653; 4 citations on Scopus)
- 7) *Tuning the growth for a selective nucleation of chains of Quantum Dots behaving as single photon emitters*, V. Latini, E. Tisbi, E. Placidi, F. Patella, F. Biccari, M. Gurioli, A. Vinattieri, and F. Arciprete, *J. Cryst. Growth* **457**, 177-183 (2017). (IF₂₀₁₇=1,742; 2 citations on WoS)
- 8) *Graphene Oxide Nanoplatfoms to Enhance Catalytic Performance of Iron Phthalocyanine for Oxygen Reduction Reaction in Bioelectrochemical Systems*, M. A. Costa de Oliveira, B. Mecheri, A. D'Epifanio, E. Placidi, F. Arciprete, F. Valentini, A. Perandini, V. Valentini, S. Licoccia, *J. of Power Sources* **356**, 381-388 (2017) (IF₂₀₁₇=6,945; 10 citations on Scopus)
- 9) *Influence of diamond surface crystal-orientation on transfer doping of H-terminated diamond by V₂O₅*, C. Verona, F. Arciprete, M. Foffi, E. Limiti, M. Marinelli, E. Placidi, G. Prestopino, G. Verona Rinati, *Appl. Phys. Lett.* **112**, 181602 (2018) (IF₂₀₁₇*=3,495; 0 citations)
- 10) *Graphene-based electrocatalysts boost oxygen reduction in microbial fuel cells*, B. Mecheri, V.C.A. Ficca, M.A. Costa de Oliveira, A. D'Epifanio, E. Placidi, F. Arciprete, S. Licoccia, *Appl. Catalysis B* **237**, 699-707 (2018) (IF₂₀₁₇*=11,698; 0 citations)

*Note: since the IF of 2018 is not yet known, I have reported the IF of 2017 for these articles.

Other presented attachments, apart those required:

- 4 presentation letters from professors of Italian/foreign universities testifying several competencies and the activities in the different collaborations during my career. In particular I report below the subject related to each letter
 - 1) Prof. Fulvia Patella. Retired full professor of the University of Rome Tor Vergata, Physics department. In this letter is described my early career and all the activity in the MBE group in physics department of Tor Vergata.
 - 2) Prof. Nunzio Motta. Full professor of the Queensland University of Technology. In this letter is described both my very early career on STM studies on several systems and my recent collaboration with him.
 - 3) Prof. Silvia Licoccia. Full professor and head of Chemistry department of the University of Rome Tor Vergata. In this letter are described both my collaboration with Licoccia's group on electrocatalytical nanocomposites to be employed on fuel cells, and my several collaborations with Chemistry department in general.
 - 4) Prof. Viviana Fafone. National responsible for the VIRGO experiment national and full professor of the University of Rome Tor Vergata, Physics department. In this letter, the collaboration with mirror coating group of VIRGO experiment is described.
- Invitation letter from QUT (Australia)
- Invitation letter from CIGB/CEAC (Cuba)
- Certification of lectures hold in CIGB (Cuba)
- Imperial College activity report on Accademia dei Lincei/Royal society grant
- Approved list of CNR bilateral projects.
- CNR certification of the award.

- A copy of my book “Introduzione alla Microscopia a Forza Atomica”, written for students and young researchers interested to a wide physical introduction to Atomic Force Microscopy. I have also translated the textbook in English.

Rome 04/09/2018

Signature

A handwritten signature in black ink, appearing to read "Giuseppe Giamberini". The signature is written in a cursive style with a large initial 'G' and a long horizontal stroke at the end.

Other qualifications useful for the evaluation

Participation/direction of scientific groups

- Participation to the international research group in the framework of the project FORUM FIB http://cordis.europa.eu/project/rcn/57788_en.html
Participants: Centre National de la Recherche Scientifique (France) FEI Electron Optics B.V. (Netherlands) Forschungszentrum Juelich GMBH (Germany) Institut National des Sciences Appliquees de Lyon (France) National centre for Scientific Research "DEMOKRITOS" (Greece) STMicroelectronics SA (France) Università di Roma "Tor Vergata" (Italy) University of Cyprus (Cyprus)
- Participation to the national research group in the framework of the project PRIN 2002 "Growth of semiconductors quantum dots on nanopatterned substrates"
Participants: Università di Roma TRE Università di Tor Vergata
- Participation to the international research group for the study of chemical preparation of III-V surfaces.
Participants: Università di Tor Vergata INFM Institute of Semiconductor Physics, Novosibirsk State University Ecole Polytechnique, 91128 Palaiseau LURE, Université Paris-Sud, Pubblicazioni: Surf. Sci. 570, 237-244 (2004) Surf. Sci. 600, 3160-3166 (2006)
- Participation to the national research group in the framework of the projects: PRIN 2005: "Nucleazione spazialmente controllata di punti quantici per emettitori a singolo fotone". PRIN 2007: "Colmare la distanza tra teoria ed esperimento: verso il controllo della crescita e delle proprietà delle nanostrutture di semiconduttori".
The collaboration lasted beyond the projects deadline and many articles have been published.
Participants: CNR-ISM CNR-IFN Università di Roma "Tor Vergata" Università di Modena e Reggio Emilia Università di Firenze
- Co-direction of the international collaboration for the growth and characterization of III-V diluted magnetic semiconductors (DMS) with Max Planck Institute of Stuttgart. A FET was submitted and reviewed as eligible to be funded, but not funded for budget limitation. Several articles have been published 2008 to 2011 Phys. Rev. B 78, 155310 (2008) Phys. Rev. B 81, 094412 (2010) New J. Phys. 12, 093022 (2010) Appl. Phys. Lett. 98, 022503 (2011) Phys. Rev. B 83, 094420 (2011)
- Direction of the morphological characterization work-package of peptide/molecular aggregates international team.
Many articles have been published on the The Journal of Physical Chemistry B 114, 10674-10683 (2010) Journal of Physical Chemistry B, 117, 5448-5459 (2013) Soft Matter 10, 2508-2519 (2014) Journal of Peptide Science 20, 494-507 (2014) Biomacromolecules 15, 3412-3420 (2014) Journal of Peptide Science 20, S193 (2014) Langmuir 31, 7572-7580 (2015) Langmuir 32, 11560-11572 (2016) New Journal of Chemistry 41 (2), 639-649 (2017)
Participants are: CNR-ISM, Università di Tor Vergata, Università di Padova, Polytechnic University of Catalunya, ETH Zurich, University of Reading, University of Athens,
- Participation to the international research group for the study of electronic and morphological properties of grain boundaries of graphite/graphene and for the study of formation of graphene from SiC.
Participants: Queensland University of Technology, ISM-CNR, Università Tor Vergata
Publications: Carbon 68, 330-336 (2014) Carbon 91, 378-385 (2015), a third is in preparation.
- Direction of the research group on the electronic properties of GaAsBi alloys, in the framework of the project CAS-CNR. A first publication is under review on Physical Review

Materials

Participants: ISM-CNR Inst. of Physics (CAS) Università di Roma Tor Vergata

- Participation in the collaboration with Paul Drude Institute di Berlino for the study of Phase Change Materials. A first article has been published (AIP Advances 7 (1), 015106 (2017)) and recently a H2020 project has been granted.
- Participation to the joint research group between chemistry department of Univ. Rome Tor Vergata with the Center for Genetic Engineering and Biotechnology (Havana, Cuba) for the study of synthetic peptides use in pharmacological field. The collaboration is framed within the project progetto RISE Nano-Supremi
- Direction of the morphological/electronic characterization work-package of Graphene-based and nonocomposite electrocatalysts employed in fuel cells.

Participants: ISM-CNR, Univ Roma "Tor Vergata" Physics and Chemistry department.

- Participation to VIRGO coating group for the morphological and electronic characterization of coated mirror to be employed in the VIRGO experiment.

Conferences and workshops:

1. *STM study of the Ag/GaAs(001) and island formation.* **E. Placidi**, M. Fanfoni F. Arciprete, F. Patella, N. Motta, A. Sgarlata and A. Balzarotti; E-MRS Meeting, European Material and Research Science, Strasbourg (France) June 1-4, 1999 – (**orale**)
2. Physics for the XXI Century, Roma (Italia), 04-07 September 2000.
3. *Growth and Characterization of Epitaxial GaAs and Nanostructures: preliminary results.* F. Arciprete, F. Patella, **E. Placidi**, M. Fanfoni, A. Sgarlata, N. Motta, and A. Balzarotti. INFM Meeting, Catania 14-18 June 1999 - (**poster**). *STM study of the Ag/GaAs(001)2x4 interface formation.* **E. Placidi**, F. Arciprete, F. Patella, M. Fanfoni, N. Motta, and A. Balzarotti, (**poster**).
4. *Morphology of self-assembled InAs quantum dots on GaAs(001).* F. Patella, F. Arciprete, M.Fanfoni, S. Nufri, **E. Placidi** and A. Balzarotti. INFM Meeting, Genova 12-16 June 2000 - (**poster**).
5. *Morphology of self-assembled InAs quantum dots on GaAs(001).* F. Arciprete, F. Patella, S. Nufri, M. Fanfoni, **E. Placidi**, D.Schiumarini, and A. Balzarotti. INFM Meeting, Roma 18-22 June 2001 (**oral**). *HREELS study of the surface anisotropy of GaAs(001).* A. Balzarotti, M. Fanfoni, F. Patella, F. Arciprete, S. De Giorgio, **E. Placidi**, (**poster**)
6. "Nanotubes and Nanostructures", Frascati, Italy, 23-28 September, 2002.
7. *Electronic anisotropy study of the GaAs(001) As-rich surfaces by means of High Resolution Energy Loss Spectroscopy.* **E. Placidi**, F. Arciprete, F. Patella, M.Fanfoni and A. Balzarotti, ECOSS 22, September 2003, Praha, Czech Republic. (**oral**)
8. *The very surface states on GaAs(001) surface by means of electronic and optical techniques,* **E. Placidi**, F. Arciprete, C. Hogan, F. Patella, M. Fanfoni, C. Goletti, P. Chiaradia, A. Balzarotti, (**oral**); *Two-to-three dimensional transition in the InAs/GaAs(001) heteroepitaxial growth,* **E. Placidi**, F. Arciprete, S. Nufri, M. Fanfoni, F. Patella, A. Sgarlata, A. Balzarotti (**poster**), APS March Meeting 2004, 22-26 Marzo 2004 Montreal, Canada
9. *Two-to-three dimensional transition in the InAs/GaAs(001) heteroepitaxial growth,* **E. Placidi**, F. Arciprete, S. Nufri, M. Fanfoni, F. Patella, A. Sgarlata, A. Balzarotti, Pre-APS

Workshop on Nanoscience and Nanostructured Materials, 19-20 Marzo 2004 Montreal, Canada (**poster**)

10. *Dynamic scaling and microscopic mechanisms during growth mode transition of the InAs/GaAs(001) heterostructure*, **E. Placidi**, F. Arciprete, V.Sessi, M. Fanfoni, F. Patella and A. Balzarotti, 23rd European Conference on Surface Science (ECOSS-23) 4. - 9. Sept. 2005, Berlin, Germany (**oral**)
11. *Dynamic scaling and microscopic mechanisms during growth mode transition of the InAs/GaAs(001) heterostructure*, **E. Placidi**, F. Arciprete, V.Sessi, M. Fanfoni, F. Patella and A. Balzarotti, Nanocose meeting, Villa Mondragone, Università di Roma "Tor Vergata" 3 - 5 October 2005, Rome Italy (**invited oral**)
12. *Step erosion during nucleation of InAs/GaAs(001) quantum dots*, **E. Placidi**, F. Arciprete, V.Sessi, M. Fanfoni, F. Patella and A. Balzarotti, MRS fall meeting 2005, 28th November – 2nd December, Boston, USA (**oral**).
13. Epitaxial Growth and Fundamental Properties of Semiconductor Nanostructures, 17th-22nd September 2006, Bonassola, Italy.
14. *Surface Diffusion and Scaling Behavior in the nucleation and growth of InAs Quantum Dots on GaAs(001)*, **E. Placidi**, F. Arciprete, M. Fanfoni, E. Orsini, F. Patella and A. Balzarotti, MRS fall meeting 2006, 27th November – 1st December, Boston, USA (**oral**)
15. *The InAs/GaAs(001) quantum dots transition: advances on understanding*, Facets of Heteroepitaxy: Theory, Experiment, and Computation, 2008, 10-15 February, Banff, Canada (**invited oral**)
16. *Single quantum dot emission by nanoscale selective growth of InAs on GaAs: a bottom-up approach*: Collaborative Conference on Interacting Nanostructures (CCIN), 2009 9-13 November, San Diego, USA (**invited oral**)
17. *Mechanism in formation and evolution of InAs/GaAs(001) quantum dots*. Nanoscience & Nanotechnology 2010, 20-23 September 2010, Frascati, Italy (**invited oral**)
18. *Searching an alternative self-assembly approach for quantum dots lateral ordering*, ACMM 22/APMC 10/ICONN 2012 Perth, 5-9 February 2012, Australia (**oral**)
19. *InAs on GaAs single quantum dot nucleation on SiO₂ patterned areas: a bottom-up approach*, ACMM 22/APMC 10/ICONN 2012 Perth, 5-9 February 2012, Australia (**oral**)
20. *Multi-stacked ordering of quantum dots driven by As kinetics*. FisMat 2013, September 9-13, 2013; Milano (**oral**)
21. Single exciton emission from multistacked InAs quantum dots chains self-assembled on GaAs(001). EuroMBE 2015, Canazei, 15-18 March 2015 (**oral**)
22. Single exciton emission from multistacked InAs quantum dots chains self-assembled on GaAs(001). XI Convegno Nazionale Materiali Nanofasici, Roma, 26-28 October 2015 (**oral**)

Invited seminars

1. “*Epitaxial Growth of Semiconductor Strained Heterostructures. The case of InAs/GaAs(001)*”, Queensland University of Technology, Brisbane, Australia, 2 April 2012.
2. “*Selective Growth and Multistacked Ordering of InAs Quantum Dots on GaAs Driven by As Kinetics*”, ENEA Casaccia, Italy, 21 January 2014.

Lectures in national/international schools:

1. **Lecture**, “*La microscopia AFM in scienza dei materiali*”, ISM-CNR, Corso di microscopia a scansione a sonda locale, 19-21 february 2013
2. **Lecture**, “*The AFM microscopy in material science*”, *Training School on Scanning Tunneling Microscopy (STM), Atomic Force Microscopy (AFM) and Scanning Near-field Optical Microscopy (SNOM)*, ECOST-TRAINING_SCHOOL-MP1302-240914-048696, 24-26 september 2014

Meeting organization:

- **Program committee:** EMN Meeting on Quantum Communication and Quantum Imaging-2016, 23-26 August 2016, Berlin (Germania). <http://emnmeeting.org/QCQI/committee/>
- **International Advisory Committee:** EMN Meeting on Quantum Matter 2016, 30 November – 4 December 2016, Mauritius. <http://emnmeeting.org/quantum-matter/committee/>

Accepted Beamline proposal

- 1 September 2003 - European Synchrotron Radiation Facility (ESRF), Grenoble (France). Experimento SI-891, approved and financed by ESFR: “*Study of the Copper diffusion on MgO(100) Surface*”. (proposer S. Colonna)
- 2 ELETTRA. Title: First stages of Mn/GaAs(001) interface formation. ALOISA 11-16/07/2007 (proposer E. Placidi)
- 3 ELETTRA. Title: Magnetic properties of Mn/GaAs(001)1x2 reconstruction formation. 2009 APE (proposer E. Placidi)
- 4 October - November 2012 - European Synchrotron Radiation Facility (ESRF), Grenoble (France). Experimento HE-3849, approved and financed by ESFR: “*Magnetic properties of two-dimensional Mn structures on the GaAs(001) growth surface*”. (proposer S. Colonna)
- 5 ELETTRA (20170161). Title: Electronic properties of MBE-grown Bi-doped GaAs thin films, 4-10 Settembre 2017 (proposer J. Honolka)

Participation to editorial boards:

- From 2014 in the editorial board of Advanced Device Materials (Print ISSN 2055-0308, On-line ISSN 2055-0316).

Referee for these journals:

AIP: Applied Physics Letters, Journal of Applied Physics

AVS: Journal of Vacuum Science and Technology A & B

IOP: Journal of Physics: Condensed Matter, Nanotechnology, New Journal of Physics, Journal of Physics D: Applied Physics

Elsevier: Applied Surface Science, Surface Science, Semiconductor Science & Technology, Thin solid films, Physica E

Springer: Journal of Optics A: Pure and Applied Optics, Nanoscale Research Letters

Other Journals: Nanoscale, Physica Status Solidi

Project referee for:

Natural Sciences and Engineering Research Council (Canada)

McGill University (Canada)

Estonian Research Council (Estonia)

MIUR (Italia)

Dissemination activity:

- **2010-2018** – Lesson and stages for high school student in the framework of the activity of Piano Didattico Nazionale “*Stage nelle Università*” (<http://www.stageatorvergata.it/>).
- **Dissemination seminar** “*Il futuro e le Nanotecnologie*”, Scienza Orienta, Università di Roma “Tor Vergata”, Macroarea di Scienze Matematiche Fisiche e Naturali. 13/02/2013.
- **Dissemination seminar** “*Il futuro e le Nanotecnologie*”, Scienza Orienta, Università di Roma “Tor Vergata”, Macroarea di Scienze Matematiche Fisiche e Naturali. 12/02/2014.
- **Dissemination seminar** “*Il futuro e le Nanotecnologie*”, Scienza Orienta, Università di Roma “Tor Vergata”, Macroarea di Scienze Matematiche Fisiche e Naturali. 6/02/2015.
- **Dissemination seminar** “*Il futuro e le Nanotecnologie*”, Scienza Orienta, Università di Roma “Tor Vergata”, Macroarea di Scienze Matematiche Fisiche e Naturali. 17/02/2016.
- **Dissemination seminar** “*La rivoluzione nanotecnologica*”, Scienza Orienta, Università di Roma “Tor Vergata”, Macroarea di Scienze Matematiche Fisiche e Naturali. 15/02/2017

Complete list of publications: (in * where corresponding author):

- 1) **E. Placidi***, M. Fanfoni, F. Arciprete, F. Patella, N. Motta, A. Balzarotti. *Scaling law and dynamical exponent in the Volmer-Weber growth mode: Silver on GaAs(001) 2 × 4* Mat. Sci. & Eng. B **69-70** (2000) 243-246
- 2) M. Fanfoni, **E. Placidi**, F. Arciprete, F. Patella, N. Motta, A. Balzarotti. *Dynamic behaviour of silver islands growing on GaAs(001) 2 × 4 substrate*, Surf. Sci. **445** (2000) L17-L22
- 3) F. Patella, M. Fanfoni, F. Arciprete, S. Nufri, **E. Placidi**, and A. Balzarotti. *Kinetic aspects of the morphology of self-assembled InAs quantum dots on GaAs (001)*, Appl. Phys. Lett. **78** (2001) 320-322.
- 4) F. Patella, F. Arciprete, **E. Placidi**, S. Nufri, M. Fanfoni, A. Sgarlata, D. Schiumarini, A. Balzarotti. *Morphological instabilities of the InAs/GaAs(001) interface and their*

effect on the self-assembling of InAs quantum-dot arrays, Appl. Phys. Lett. **81** 2273-2275 (2002).

- 5) A. Balzarotti, M. Fanfoni, F. Patella, F. Arciprete, **E. Placidi**, G. Onida, R. Del Sole, *The GaAs(001) c(4×4) surface: A New Perspective from Energy Loss Spectra*, Surf. Sci. Lett. **524**, L71-L76 (2003).
- 6) A. Balzarotti, M. Fanfoni, F. Patella, F. Arciprete, and **E. Placidi**, *Electronic anisotropy of the GaAs(001) surface studied by the energy loss spectroscopy*, Microel. J. **34**, 595-597 (2003)
- 7) F. Patella, S. Nufri, F. Arciprete, M. Fanfoni, **E. Placidi**, A. Sgarlata, and A. Balzarotti. *Structural Study of the InAs Quantum-Dot Nucleation on GaAs(001)*, Microel. J. **34**, 419-422 (2003)
- 8) A. Balzarotti, **E. Placidi**, F. Arciprete, M. Fanfoni, F. Patella, *Anisotropy of the GaAs(001)-β2(2×4) surface from high-resolution electron-energy-loss spectroscopy*, Phys. Rev. B, **67** 115332 (5 pages) (2003).
- 9) F. Patella, S. Nufri, F. Arciprete, M. Fanfoni, **E. Placidi**, A. Sgarlata, and A. Balzarotti, *Tracing the two-to-three dimensional transition in the InAs/GaAs(001) heteroepitaxial growth*, Phys. Rev. B, **67** 205308 (5 pages) (2003).
- 10) F. Arciprete, C. Goletti, **E. Placidi**, M. Fanfoni, F. Patella, P. Chiaradia, C. Hogan and A. Balzarotti, *Surface versus bulk contributions from reflectance anisotropy and electron energy loss spectra of the GaAs(001)-c(4x4) surface*, Phys. Rev. B, **68** 125328 (5 pages) (2003).
- 11) F. Arciprete, C. Goletti, **E. Placidi**, C. Hogan, P. Chiaradia, M. Fanfoni, F. Patella, and A. Balzarotti, *Surface states at the GaAs(001)2 x 4 surface*, Phys. Rev. B **69**, 081308(R) (4 pages) (2004)
- 12) F. Patella, A. Sgarlata, F. Arciprete, S. Nufri, P. Skutznik, **E. Placidi**, M. Fanfoni, N. Motta and A. Balzarotti *Self-assembly of InAs and Si/Ge quantum dots on structured surface*, J. Phys. Cond. Matt **16** S1503-S1534 (2004). (**Invited review paper**)
- 13) O.E. Tereshchenko, **E. Placidi**, P. Chiaradia, A. Balzarotti, and D. Paget, *Structure of chemically prepared InAs(100) surface*, Surf. Sci. **570**, 237-244 (2004).
- 14) H. Guyot, N. Motta, **E. Placidi** and H. Balaska, *Characterization of cleaved surfaces of a monophosphate tungsten bronze*, Rev. Adv. Mater. Sci. **8** (2004) 34-40.
- 15) I. Aureli, V. Corradini, C. Mariani, **E. Placidi***, F. Arciprete, A. Balzarotti, *Valence band and In-4d core level study of de-capped and ion-bombarded-annealed In-terminated InAs(001) surfaces*, Surf. Sci. **576**, 123-130 (2005).
- 16) C. Hogan, **E. Placidi** and R. Del Sole, *Geometric structure and optical properties of the GaAs(001)-c(4×4) surface*, Phys. Rev. B, **71**, 041308(R) (4 pages) (2005).
- 17) **E. Placidi***, F. Arciprete, V. Sessi, M. Fanfoni, F. Patella and A. Balzarotti, *Step erosion during InAs quantum dots on GaAs(001) surface*, Appl. Phys. Lett. **86**, 241913, (three pages) (2005) and Virtual Journal of Nanoscale Science & Technology, Volume 11, Issue 24. Cover page for Appl. Phys. Lett. Volume 86, Issue 24.
- 18) F. Patella, F. Arciprete, M. Fanfoni, V. Sessi, A. Balzarotti and **E. Placidi**, *Reflection high electron energy diffraction observation of surface mass transport at the two- to three- dimensional growth transition of InAs on GaAs(001)*. Appl. Phys. Lett. **87**, 252101 (3 pages) (2005) and Virtual Journal of Nanoscale Science & Technology, Volume 12, Issue 26 (2005).

- 19) F. Patella, F. Arciprete, M. Fanfoni, A. Balzarotti, and **E. Placidi**, *Apparent critical thickness versus temperature for InAs quantum dot growth on GaAs(001)*. Appl. Phys. Lett. **88**, 161903 (3 pages) (2006) and Virtual Journal of Nanoscale Science & Technology, Volume 13, Issue 17 (2006).
- 20) **E. Placidi***, C. Hogan, F. Arciprete, M. Fanfoni, F. Patella, R. Del Sole, and A. Balzarotti, *Adsorption of molecular oxygen on GaAs(001) studied using high resolution electron energy loss study*. Phys. Rev. B **73**, 205345 (9 pages) (2006)
- 21) F. Arciprete, **E. Placidi**, V. Sessi, M. Fanfoni, F. Patella and A. Balzarotti, *How kinetics drives the two- to three-dimensional transition in semiconductor strained heterostructures: the case of InAs/GaAs(001)*. Appl. Phys. Lett. **89** 041904 (3 pages) (2006) and Virtual Journal of Nanoscale Science & Technology, Volume 14, Issue 6 (2006)
- 22) O.E. Tereshchenko, D. Paget, P. Chiaradia, **E. Placidi**, J.E. Bonnet, F. Wiame, and A. Taleb-Ibrahimi, *Chemically prepared well-ordered InP(001) surfaces*, Surf. Sci. **600**, 3160-3166 (2006)
- 23) **E. Placidi***, F. Arciprete, F. Patella, M. Fanfoni, E. Orsini and A. Balzarotti, *Kinetic effects in the InAs/GaAs(001) two-dimensional to three-dimensional transition* J. of Phys.: Cond. Matt. **19**, 225006 (21 pages) (2007)
- 24) P. D. Szkutnik, A. Sgarlata, **E. Placidi**, N. Motta, I. Berbezier and A. Balzarotti, *Influence of patterned silicon and silica surfaces on the nucleation of Ge nanostructures*. Surf. Sci. **601**, 2778-2782 (2007).
- 25) M. Fanfoni, **E. Placidi**, F. Arciprete, E. Orsini, F. Patella, A. Balzarotti, *Sudden nucleation versus scale invariance of InAs quantum dots on GaAs*, Phys. Rev. B **75**, 245312 (2007), and Virtual Journal of Nanoscale Science & Technology Volume 15, Issue 24
- 26) O. Bute, GH. V. Cimpoca, **E. Placidi**, F. Arciprete, F. Patella, M. Fanfoni, A. Balzarotti, *The monitoring of 2d-3d transition for InAs/GaAs (001) self-assembled quantum dots by atomic force microscopy*, J. of Opt. and Adv. Mat. **10**, 74–79 (2008)
- 27) L. Herrera Diez, R.K. Kremer, J. Honolka, K. Kern, A. Enders, M. Rössle, E. Arac, **E. Placidi** and F. Arciprete, *Complex domain wall dynamics in compressively strained Ga_{1-x}Mn_xAs epilayers*, Phys. Rev. B **78**, 155310 (2008)
- 28) F. Patella, F. Arciprete, **E. Placidi**, M. Fanfoni, A. Balzarotti, A. Vinattieri, L. Cavigli, M. Abbarchi, M. Gurioli, Gerardino and L. Lunghi, *Single quantum dots emission by nanoscale selective growth of InAs on GaAs: a bottom-up approach*, Appl. Phys. Lett. **93**, 231904 (2008), and Virtual Journal of Nanoscale Science & Technology Volume 18, Issue 25
- 29) **E. Placidi***, A. Dalla Pia, F. Arciprete, *Annealing effects on faceting of InAs/GaAs(001) quantum dots*, Appl. Phys. Lett. **94**, 021901 (2009) and Virtual Journal of Nanoscale Science & Technology Volume 19, Issue 4
- 30) S. D. Thorpe, F. Arciprete, **E. Placidi**, F. Patella, M. Fanfoni, A. Balzarotti, S. Colonna, F. Ronci, A. Cricenti, A. Verdini, L. Floreano, A. Morgante, *XPS and STM study of Mn incorporation on the GaAs (001) surface*, Superlattices and Microstructures **46**, 258-265, (2009)
- 31) F. Arciprete, **E. Placidi**, F. Patella, M. Fanfoni, A. Balzarotti, A. Vinattieri, L. Cavigli, M. Abbarchi, M. Gurioli, Gerardino and L. Lunghi, *Selective growth of InAs quantum dots on SiO₂-masked GaAs*, J. Nanophoton. Vol. **3**, 031995 (8 pages) (2009)

- 32) F. Arciprete, **E. Placidi**, M. Fanfoni, F. Patella, A. Della Pia, A. Balzarotti, *Temperature dependence of the size distribution function of InAs Quantum Dots on GaAs(001)* Phys. Rev. B **81**, 165306 (5 pages) (2010)
- 33) L. Herrera Diez, J. Honolka, K. Kern, H. Kronmuller, F. Arciprete, **E. Placidi**, A.W. Rushforth, R.P. Champion, and B.L. Gallagher, *Magnetic aftereffect in GaMnAs*, Phys. Rev. B **81**, 094412 (6 pages) (2010)
- 34) I. Hamley, G. Brown, V. Castelletto, G. Cheng, M. Venanzi, M. Caruso, **E. Placidi**, C. Aleman, G. Revilla-López, D. Zanuy, *Self-Assembly of a Designed Amyloid Peptide Containing the Functional Thienylalanine Unit*, The Journal of Physical Chemistry B **114**, 10674-10683 (2010)
- 35) J. Honolka, L. Herrera Diez, R.K. Kremer, K. Kern, F. Arciprete, **E. Placidi**, *Temperature dependent Néel wall dynamics in GaMnAs/GaAs*, New J. Phys. **12**, 093022 (17 pages) (2010)
- 36) **E. Placidi***, E. Zallo, F. Arciprete, M. Fanfoni, F. Patella and A. Balzarotti, *Comparative study of low temperature growth of InAs and InMnAs quantum dots* Nanotechnology **22**, 195602 (2011)
- 37) L. Herrera Diez, M. Konuma, J. Honolka, K. Kern, **E. Placidi**, F. Arciprete, A.W. Rushforth, R.P. Champion, and B.L. Gallagher, *Magnetism and carrier modulation in (Ga,Mn)As/organic-dye hybrid devices*, Appl. Phys. Lett. **98**, 022503 (2011)
- 38) L. Herrera Diez, M. Konuma, R. K. Kremer, J. Honolka, K. Kern, **E. Placidi** and F. Arciprete, *Magnetoelectric properties of oxygenated (Ga,Mn)As*, Phys. Rev. B **83**, 094420 (2011)
- 39) S. Colonna, **E. Placidi**, F. Ronci, A. Cricenti, F. Arciprete, A. Balzarotti, *The role of kinetics on the Mn-induced reconstructions of the GaAs(001) surface*, J. Appl. Phys. **109**, 123522 (2011)
- 40) A. Cricenti, S. Colonna, **E. Placidi**, M. Luce, J. Qi, N. H. Tolk, G. Margaritondo, *Optical techniques for pump-probe magnetic measurements and nanoimaging of biological samples*, Rend. Fis. Acc. Lincei **22**, S49-S57 (2011)
- 41) **E. Placidi***, F. Arciprete, A. Balzarotti and F. Patella, *Scaling behavior of GaAs and GaMnAs quantum rings grown by droplet epitaxy*, Appl. Phys. Lett. **101**, 141901 (2012)
- 42) M. Fanfoni, F. Arciprete, C. Tirabassi, D. Del Gaudio, A. Filabozzi, A. Balzarotti, F. Patella, **E. Placidi***, *Coarsening effect on island size scaling: The model case InAs/GaAs(001)*, Phys. Rev. E **86**, 061605 (2012)
- 43) Yu. G. Galitsyn, A. A. Lyamkina, S. P. Moshchenko, D. V. Dmitriev, A. I. Toropov, Yu. I. Mikhailov, **E. Placidi**, *Statistical Approach to the Strain-Driven Formation of InAs Quantum Dots on GaAs(001)*, Doklady Akademii Nauk Vyssej Školy Rossii, vol. **2**, p. 27-33 (2012)
- 44) F. Arciprete, **E. Placidi**, R. Magri, M. Fanfoni, A. Balzarotti and F. Patella, *“The Unexpected Role of As in Driving the Selective Growth of InAs Quantum Dots on GaAs”*, ACS Nano, **7**, 3868-3875 (2013)
- 45) M. Caruso, **E. Placidi**, E. Gatto, C. Mazzuca, L. Stella, G. Bocchinfuso, A. Palleschi, F. Formaggio, C. Toniolo, M. Venanzi, *“Fibrils or globules? Tuning the morphology of peptide aggregates from helical Building Blocks”*, Journal of Physical Chemistry B, **117**, 5448-5459 (2013)

- 46) F. Arciprete, **E. Placidi**, R. Magri, D. Del Gaudio, and F. Patella *Kinetically Driven Selective Growth of InAs Quantum Dots on GaAs*, J. Mater. Res., **28**, 3201-3209, (2013) (**Invited Feature Paper**)
- 47) A. Capasso, **E. Placidi**, H.F. Zhan, E. Perfetto, J. M. Bell, Y.T. Gu , N. Motta “*Graphene ripples generated by grain boundaries in Highly Ordered Pyrolytic Graphite*”, Carbon **68**, 330-336 (2014)
- 48) M. Caruso, E. Gatto, **E. Placidi**, G. Ballano, F. Formaggio, C. Toniolo, D. Zanuy, C. Alemán and M. Venanzi, *A single-residue substitution inhibits fibrillization of Ala-based pentapeptides. A spectroscopic and molecular dynamics investigation*, Soft Matter **10**, 2508-2519 (2014)
- 49) G. Bocchinfuso, P. Conflitti, S. Raniolo, M. Caruso, C. Mazzuca, E. Gatto, **E. Placidi**, F. Formaggio, C. Toniolo, M. Venanzi, A. Palleschi, *Aggregation propensity of Aib-homopeptides of different length. An insight from Molecular Dynamics Simulations*, Journal of Peptide Science **20**, 494-507 (2014).
- 50) R. Magri, **E. Placidi**, F. Arciprete, and F. Patella, *Selective Growth of InAs Quantum Dots on GaAs driven by As kinetics*, Crystal Research and Technology **49**, 546-551 (2014).
- 51) I. W. Hamley, S. Kirkham, A. Dehsorkhi, V. Castelletto, J. Adamcik, R. Mezzenga, J. Ruokolainen, C. Mazzuca, E. Gatto, M. Venanzi, **E. Placidi**, P. Bilalis, H. Iatrou, *Self-Assembly of a Model Peptide Incorporating a Hexa-Histidine Sequence Attached to an Oligo-Alanine Sequence, and binding to Gold NTA/Nickel Nanoparticles*, Biomacromolecules **15**, 3412–3420 (2014)
- 52) **E. Placidi***, F. Arciprete, V. Latini, S. Latini, R. Magri, M. Scuderi, G. Nicotra and F. Patella, *Lateral ordering determined by a trade-off between morphological and elastic interlayer interactions in InAs/GaAs(001) quantum dots multilayers*, Appl. Phys. Lett. **105**, 111905 (2014)
- 53) M. Caruso, E. Gatto, **E. Placidi**, G. Ballano, F. Formaggio, C. Toniolo, D. Zanuy, C. Aleman, M. Venanzi, *Tuning the self-association of an Ala-based homo-pentapeptide by substitution with a single, internal Aib residue*, Journal of Peptide Science **20**, S193 (2014).
- 54) **E. Placidi***, F. Arciprete, F. Sarti, M. Gurioli, A. Vinattieri, F. Patella, *Single QD emission from arrays of QD chains obtained by a patterning-free method*. Adv. Device Mater. **1**, 33-37 (2015) (**Invited Paper**)
- 55) V. Latini, **E. Placidi***, F. Arciprete, F. Patella, *In-line correlation and ordering of InAs/GaAs Quantum dots multistacked structures*. J. Crys. Growth. **419**, 138-142 (2015)
- 56) B. Gupta, **E. Placidi**, C. Hogan, N. Mishra, F. Iacopi, N. Motta, *The transition from 3C SiC(111) to graphene captured by UHV STM*, Carbon **91**, 378-385 (2015)
- 57) S. Bobone, E. Miele, B. Cerroni, D. Roversi, A. Bocedi, E. Nicolai, A. Di Venere, **E. Placidi**, G. Ricci, N. Rosato, L. Stella, *Liposome-Templated Hydrogel Nanoparticles as Vehicles for Enzyme-Based Therapies*, Langmuir **31**, 7572-7580 (2015)
- 58) M. Fanfoni, A. Filabozzi, **E. Placidi**, F. Patella, A. Balzarotti, F. Arciprete, *2D Voronoi tessellation generated by lines and belts of dots*. Phys. Lett. A **380**, 516-519 (2016)
- 59) M. Carbonaro, A. di Venere, A. Filabozzi, P. Maselli, V. Minicozzi, S. Morante, E. Nicolai, A. Nucara, **E. Placidi**, and F. Stellato, *Role of dietary antioxidant (-)-*

epicatechin in the development of β -lactoglobulin fibrils, *Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics* **1864**, 766-772 (2016)

- 60) E. Gatto, R. Lettieri, F. Di Giorgio, A. Colella, R. Magnusson, F. Bjorefors, **E. Placidi**, A. Palleschi, M. Venanzi, *DPPTE Thiolipid Self Assembled Monolayer: a Critical Assay*, *Langmuir* **32**, 11560–11572 (2016)
- 61) V. Latini, **E. Placidi**, F. Arciprete, F. Patella, E. Tisbi and R. Magri, *Stress determined nucleation sites above GaAs capped arrays of InAs quantum dots*, *J. Appl. Phys.* **120**, 125704 (2016)
- 62) E. Tisbi, V. Latini, F. Patella, **E. Placidi*** and F. Arciprete, *Anisotropic cation diffusion in the GaAs capping of InAs/GaAs(001) Quantum Dots*, *J. Appl. Phys.* **120**, 235303 (2016)
- 63) R. Lettieri, E. Gatto, C. Mazzuca, D. Monti, A. Palleschi, **E. Placidi**, L. Cardová, P. Drašar, and M. Venanzi, *Hierarchical transfer of chiral information from the molecular to the mesoscopic scale by Langmuir-Blodgett deposition of tetrasteroid-porphyrins*, *New Journal of Chemistry*, **41**, 639-649 (2017)
- 64) V. Latini, E. Tisbi, **E. Placidi***, F. Patella, F. Biccari, M. Gurioli, A. Vinattieri, and F. Arciprete, *Tuning the growth for a selective nucleation of chains of Quantum Dots behaving as single photon emitters*, *J. Cryst. Growth* **457**, 177-183 (2017)
- 65) J. E. Boschker, E. Tisbi, **E. Placidi**, J. Momand, A. Redaelli, B. J. Kooi, F. Arciprete and R. Calarco, *Textured Sb_2Te_3 films and $GeTe/Sb_2Te_3$ superlattices grown on amorphous substrates* *AIP advances* **7**, 015106 (2017).
- 66) M. A. Costa de Oliveira, B. Mecheri, A. D' Epifanio, **E. Placidi**, F. Arciprete, F. Valentini, A. Perandini, V. Valentini, S. Licoccia, *Graphene Oxide Nanoplatforms to Enhance Catalytic Performance of Iron Phthalocyanine for Oxygen Reduction Reaction in Bioelectrochemical Systems*, *J. of Power Sources* **356**, 381-388 (2017)
- 67) V. Latini, **E. Placidi***, R. Magri, E. Tisbi, F. Patella and F. Arciprete, *Strain-engineered arrays of InAs quantum dots on GaAs(001): epitaxial growth and modeling*, *Nanoscience and Nanotechnology Letters* **9**, 1083-1094 (2017). **Invited review article.**
- 68) F. Stellato, Z. Fusco, R. Chiaraluce, V. Consalvi, S. Dinarelli, **E. Placidi**, M. Petrosino, G. C. Rossi, V. Minicozzi, S. Morante, *The effect of sheet breaker peptides on metal associated Amyloid- peptide aggregation process*, *Biophysical Chemistry* **229**, 110-114 (2017)
- 69) M. Carbonaro, A. Filabozzi, V. Minicozzi, S. Morante, F. Stellato, **E. Placidi**, A. Di Venere, E. Nicolai, F. Ripanti, P. Postorino, A. Nucara, *Human insulin b-fibrillogenesis in the presence of epigallocatechin gallate and melatonin: structural insights from a biophysical approach*, *International Journal of Biological Macromolecules* **115**, 1157-1164 (2018)
- 70) C. Verona, F. Arciprete, M. Foffi, E. Limiti, M. Marinelli, **E. Placidi**, G. Prestopino, G. Verona Rinati, *Influence of diamond surface crystal-orientation on transfer doping of H-terminated diamond by V_2O_5* , *Appl. Phys. Lett.* **112**, 181602 (2018)
- 71) A. Amodio, E. Del Grosso, A. Troina, **E. Placidi**, F. Ricci, *Remote electronic control of DNA-based reactions and nanostructures assembly*, *NanoLetters* **18**, 2918–2923 (2018)
- 72) F. S. Farahani, B. Mecheri, M. R. Majidi, M. A. Costa de Oliveira, A. D'Epifanio, F. Zurlo, **E. Placidi**, F. Arciprete, S. Licoccia *MnO_x -based electrocatalysts for enhanced*

oxygen reduction in microbial fuel cell air cathodes *J. of Power Sources* **390**, 45-53 (2018)

- 73) E. Ciotta, P. Proposito, P. Tagliatesta, C. Lorecchio, L. Stella, S. Kaciulis, **E. Placidi**, and R. Pizzoferrato, *Differentiating between fluorescence-quenching heavy-metal ions with unfolded fullerene quantum dots*, *Sensors* **18**, 1496 (2018).
- 74) M. De Zotti, E. Gatto, B. Di Napoli, C. Mazzuca, A. Palleschi, **E. Placidi**, F. Formaggio, C. Toniolo, and M. Venanzi, *Tuning the Morphology of Nanostructured Peptide Films by Introduction of a Secondary Structure Conformational Constraint: a Case-Study of Hierarchical Self-Assembly*, *J. Phys. Chem. B* (in press, DOI: 10.1021/acs.jpcc.8b01877)
- 75) B. Mecheri, V.C.A. Ficca, M.A. Costa de Oliveira, A. D'Epifanio, **E. Placidi**, F. Arciprete, S. Licoccia, *Graphene-based electrocatalysts boost oxygen reduction in microbial fuel cells*, *Appl. Catalysis B* **237**, 699-707 (2018)

Books:

- 1) **E. Placidi**, *Elementi di Fisica del vuoto*, editor Lulu (2015). ISBN: 978-1-326-47217-7, 978-1-326-48818-5
- 2) **E. Placidi**, *Introduzione alla Microscopia a Forza Atomica*, editor Lulu (2016). ISBN: 978-1-326-81330-7
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- 1) **E. Placidi**, F. Arciprete, M. Fanfoni, F. Patella, and A. Balzarotti, *The InAs/GaAs(001) quantum dots transition: advances on understanding*, *Lecture Notes on Nanoscale Science and Technology: "Self-Assembled Quantum Dots"*, Springer, page 1-24 (2007). DOI: 10.1007/978-0-387-74191-8 (**Invited Book Chapter**)
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Rome 04/09/2018

Signature

Handwritten signature of E. Placidi in black ink, consisting of a stylized first name and a last name.