

CURRICULUM VITAE

FORMATO EUROPEO/EUROPEAN FORMAT



PERSONAL INFORMATION

Name, Surname	Matteo Passoni
Address	10, Via G. Motta, 20044, Bernareggio, Italy
House number, street name, postcode, city, country	
Telephone	+390223993267
Fax	+390223996309
E-mail	matteo.passoni@polimi.it
Website	http://www.nanolab.polimi.it/
Nationality	Italian
Place and Date of birth	Lodi, 18-07-1975

WORK EXPERIENCE

Dates (from – to)	2015 - present
Name and address of employer	Politecnico di Milano (POLIMI), piazza Leonardo da Vinci 32, 20133, Milano, Italy
Type of business or sector	University, Department of Energy
Occupation or position held	Associate Professor in physics of matter (SSD FIS/03, SC 02/B2)
Main activities and responsibilities	• Principal Investigator of an ERC Consolidator Grant (ENSURE project) • Theoretical research activities at the Micro and Nano Structured Materials Lab • Experimental activities (deposition and characterization of nanostructured coatings and films) in the field of nuclear fusion and laser-plasma interaction at the Micro and Nano Structured Materials Lab • Lecturer of the master courses "Plasma physics I+II" and "Physics of the nucleus" • Lecturer of the PhD courses "Electromagnetic radiation" and "Symmetry applications in classical and quantum physics" • Member of the faculty committees of the Master Program in Nuclear Engineering and the PhD Program in Energy and Nuclear Science and Technology at POLIMI, also with specific responsibilities in the evaluation of the students study plans proposals and in the organizing work (proposals, collaborations, managing of funded contracts)

EDUCATION AND TRAINING

Dates (from – to)	2001 - 2004
Name and type of organisation providing education and training	Politecnico di Milano, p.zza Leonardo da Vinci 32, 20133, Milano, Italy
Principal subjects occupational skills covered	Science and Technology of Radiations, Plasma Physics, Nuclear Science, Material Science
Title of qualification awarded	Doctoral Degree in "Radiation Science and Technology" (Ph.D.)
Level in National classification	Cum laude
Dates (from – to)	1995 - 2000
Name and type of organisation providing education and training	Politecnico di Milano, p.zza Leonardo da Vinci 32, 20133, Milano, Italy
Principal subjects occupational skills covered	Nuclear Engineering, Physics of Matter, Material Science
Title of qualification awarded	Master Degree in Nuclear Engineering
Level in National Classification	100/100 cum laude

RESEARCH ACTIVITIES

Research sectors

- Material Science and Nanotechnology
- Plasma Physics
- Laser-Plasma interaction and particle acceleration
- Materials for Energy
- Materials for Nuclear Fusion (W and W alloys, Rh, C, B)
- Deposition of nanostructured coatings, PVD, Pulsed Laser Deposition
- Surface Science
- Structural and Morphological characterization of materials (STM, SEM, Raman XRD, AFM).

Recent Scientific Activities.

- **2015-present** Principal Investigator of an ERC Consolidator Grant (ENSURE project)
- **2015** Co-Director of the Course "Atoms and Plasmas in Superintense Laser Fields", International School on Quantum Electronics (Erice, 12-22 July 2015).
- **2014-2015** Co-Principal Investigator of the Italian-Korean bilateral project "Advanced materials and design of targets for laser-driven ion acceleration and high field plasmonics", approved by CNR and NRF (Korea)
- **2014** - Participation to the European "Eurofusion" Program, for the development of magnetic nuclear fusion, within H2020. Project in collaboration with ENEA and Istituto di Fisica del Plasma, CNR, (IFP-CNR) Milano
- **2011 – 2014** Principal investigator of a FIRB08 "futuro in ricerca" project; project name: SULDIS. Production of nanostructured targets to be used in laser matter interaction experiments for the production of accelerated ions.
- **2010 – 2013** Participation to the EFDA (European Fusion Development Agreement) WORKPROGRAMMES 2011-2013 in the framework of ITER Physics Support Projects in collaboration with IFP-CNR. Production of nanostructured metallic coatings for tritium retention studies.
- **2012** PI of the LaseLab EUROPE (FP7) project (proposal SLIC001689) "Laser driven ion acceleration with multi-layered targets", involving experimental campaigns at CEA Saclay, France.
- **2011** Collaboration to the DANTE Project (Diagnostics Avanzata di Neutroni e Tecnologia per l'ESS/AB) in collaboration with Istituto di Fisica del Plasma di Milano (IFP-CNR). Production of boron coatings to be used as active materials in neutron detectors
- **2009 – 2011** Participation to the "2° ACCORDO DI PROGRAMMA CNR – MSE Linea progettuale D1" in collaboration with Istituto per l'Energetica e le Interfasi (IENI). Development of W-Ta alloys as coatings for harsh environments.
- **2010** Co-Director of the International Conference "Superstrong Fields in Plasmas" (Varenna, 3-9 Oct. 2010).
- **2009-2010** Participant at CARIPLO project "IMaging MAGnetic Interfaces and NAnostructures (Immagina)"

Books and Articles (Period 2008-2015)

1. E. Vassallo, R. Caniello, G. Angella, D. Dellasega, G. Granucci, V. Meller, D. Minelli, M. Pedroni, D. Ricci, V. Rigato, M. Passoni, *Journal of Nuclear Materials* **466**, 621-626 (2015)
2. D. Dellasega, S.M. Pietralunga, A. Pezzoli, V. Russo, L. Nasi, C. Conti, M.J. Vahid, A. Tagliaferri, M. Passoni, *Nanotechnology* **26**, 365601 (2015)
3. L. Laguardia, R. Caniello, A. Cremona, D. Dellasega, F. Dell'Era, F. Ghezzi, G. Gittini, G. Granucci, V. Meller, D. Minelli, F. Pallotta, M. Passoni, D. Ricci, E. Vassallo, *Journal of Nuclear Materials* **463**, 680-683 (2015)

4. A. Maffini, A. Uccello, D. Dellasega, V. Russo, S. Perissinotto, M. Passoni, *Journal of Nuclear Materials* **463**, 944-947 (2015)
5. A. Pezzoli, D. Dellasega, V. Russo, A. Gallo, P.A. Zeijlmans Van Emmichoven, M. Passoni, *Journal of Nuclear Materials* **463**, 1041-1044 (2015)
6. M.H.J. 'T Hoen, D. Dellasega, A. Pezzoli, M. Passoni, A.W. Kleyn, P.A. Zeijlmans Van Emmichoven, *Journal of Nuclear Materials* **463**, 989-992 (2015)
7. I. Prencipe, D. Dellasega, A. Zani, D. Rizzo, M. Passoni, *Science and Technology of Advanced Materials* **16**, 025007 (2015)
8. P. Carrozzo, F. Tumino, A. Facibeni, M. Passoni, C.S. Casari, A. Li Bassi, *Review of Scientific Instruments* **86**, 016112 (2015)
9. F. Ghezzi, G. Cacciamani, R. Caniello, D.C. Toncu, F. Causa, D. Dellasega, V. Russo, M. Passoni, *Journal of Physical Chemistry* **118**, 24714-24722 (2014)
10. E. Vassallo, R. Caniello, M. Canetti, D. Dellasega, M. Passoni, *Thin Solid Films* **558**, 189-193 (2014)
11. M. Passoni, A. Zani, A. Sgattoni, D. Dellasega, A. Macchi, I. Prencipe, V. Floquet, P. Martin, T.V. Liseykina, T. Ceccotti, *Plasma Physics and Controlled Fusion* **56**, 045001 (2014)
12. A. Uccello, B. Eren, L. Marot, D. Dellasega, A. Maffini, R. Steiner, D. Mathys, E. Meyer, M. Passoni, *Journal of Nuclear Materials* **446**, 106-112 (2014)
13. P. Carrozzo, F. Tumino, M. Passoni, C.E. Bottani, C.S. Casari, A. Li Bassi, *Surface Science* **619**, 77-82 (2014)
14. E. Vassallo, R. Caniello, S. Deambrosis, D. Dellasega, F. Ghezzi, L. Laguardia, E. Miorin, M. Passoni, *Journal of Fusion Energy* **32**, 642-646 (2013)
15. T. Ceccotti et al, *Physical Review Letters* **111**, 185001 (2013)
16. A. Macchi, M. Borghesi, M. Passoni, *Reviews of Modern Physics* **85**, 751-793 (2013)
17. M. Passoni, C. Perego, A. Sgattoni, D. Batani, *Physics of Plasmas* **20**, 060701 (2013)
18. F. Donati, G. Fratesi, L. Ning, A. Brambilla, M.I. Trioni, A. Li Bassi, C.S. Casari, M. Passoni, *Physical Review B* **87**, 235431 (2013)
19. A. Uccello, A. Maffini, D. Dellasega, M. Passoni, *Fusion Engineering and Design*, **88**, 1347-1351 (2013)
20. A. Uccello, D. Dellasega, S. Perissinotto, N. Lecis, M. Passoni, *Journal of Nuclear Materials* **432**, 261-265 (2013)
21. A. Macchi, A. Sgattoni, S. Sinigardi, M. Borghesi, M. Passoni, *Plasma Physics and Controlled Fusion*, **55**, 124020 (2013)
22. E. Vassallo, R. Caniello, A. Cremona, G. Croci, D. Dellasega, G. Gorini, G. Grosso, E. Miorin, M. Passoni, M. Tardocchi, *Surface and Coatings Technology* **214**, 59-62 (2013)
23. A. Zani, D. Dellasega, V. Russo, M. Passoni, *Carbon* **56**, 358-365 (2013)
24. D. Dellasega, G. Merlo, C. Conti, C. E. Bottani, M. Passoni, *Journal of Applied Physics* **112**, 084328 (2012).
25. V. Nemanič, B. Zajec, D. Dellasega, M. Passoni, *Journal of Nuclear Materials* **429**, 92-98 (2012).
26. M. Passoni, V. Russo, D. Dellasega, F. Causa, F. Ghezzi, D. Wolverson, C.E. Bottani *Journal of Raman Spectroscopy* **43**, 884-888 (2012) DOI: 10.1002/jrs.3111
27. A. Sgattoni, P. Londrillo, A. Macchi, M. Passoni *Physical Review E* **85**, 036405 (2012)
28. M. Cantoni, R. Bertacco, A. Brambilla, M. Finazzi, L. Duo, F. Ciccacci, A. Verdini, L. Floreano, A. Morgante, M. Passoni, C. S. Casari, A. Li Bassi *Physical Review B* **85**, 155456 (2012)
29. F. Donati, A. Mairov, C.S. Casari, M. Passoni, A. Li Bassi *Surface Science* **606**, 702-710 (2012)

30. C. Perego, D. Batani, A. Zani, M. Passoni *Review of Scientific Instruments* **83**, 02B502 (2012)
31. C. S. Casari, S. Foglio, M. Passoni, F. Siviero, C.E. Bottani, A. Li Bassi *Physical Review B* **84**, 155441 (2011)
32. D. Batani, M. Passoni *Nuclear Instruments and Methods A* **653**, 1 (2012)
33. F. Donati, G. Fratesi, M. Passoni, C. S. Casari, A. Mairov, C. E. Bottani, M. I. Trioni, and A. Li Bassi *Physical Review B* **83**, 153404 (2011) ISSN: 1098-0121
34. L. Laguardia, A. Cremona, M. De Angeli, E. Lazzaro, S. Ratynskaia, M. Passoni, D. Dellasega, G. Gervasini, G. Grosso, R. Schiavone and E. Vassallo *New Journal of Physics*, **13** 063006 (2011) ISSN: 1367-2630
35. F. Donati, S. Piccoli, C. E. Bottani, M. Passoni *New Journal of Physics*, **13** 053058 (2011) ISSN: 1367-2630
36. C. Perego, A. Zani, D. Batani, M. Passoni *Nuclear Instruments and Methods A* **653**, 89-93 (2011)
37. A. Zani, A. Sgattoni, M. Passoni *Nuclear Instruments and Methods A* **653**, 94-97 (2011)
38. M. Passoni, D. Dellasega, G. Grosso, C. Conti, M.C. Ubaldi, C.E. Bottani *Journal of Nuclear Materials* **404**, 1-5 (2010) ISSN: 0022-3115
39. M. Passoni, L. Bertagna, A. Zani *New Journal of Physics*, **12**, 045012 (2010) ISSN: 1367-2630
40. M. Passoni, L. Bertagna, A. Zani *Nuclear Instruments and Methods A* **620**, 46-50 (2010) ISSN: 0168-9002
41. A. Picone, G. Fratesi, A. Brambilla, P. Sessi, F. Donati, S. Achilli, L. Maini, M. I. Trioni, C. S. Casari, M. Passoni, A. Li Bassi, M. Finazzi, L. Duo, F. Ciccacci *Physical Review B* **81**, 115450 (2010) ISSN: 1098-0121
42. M. Passoni, L. Bertagna, A. Zani *AIP Conference Proceedings* **1209** 87-90 (2010) ISSN: 0094-243X
43. M. Passoni, L. Bertagna, T. Ceccotti, P. Martin *AIP Conference Proceedings* **1153** 159-163 (2009) ISSN: 0094-243X
44. A. Li Bassi, A. Bailini, F. Donati, V. Russo, M. Passoni, A. Mantegazza, C.S. Casari, C.E. Bottani *Journal of Applied Physics* **105**, 124307 (2009) ISSN: 0021-8979
45. F. Donati, P. Sessi, S. Achilli, A. Li Bassi, M. Passoni, C. S. Casari, C. E. Bottani, A. Brambilla, A. Picone, M. Finazzi, L. Duò, M. I. Trioni, and F. Ciccacci *Physical Review B*, **79**, 195430 (2009) ISSN: 1098-0121
46. C.S. Casari, S. Foglio, F. Siviero, A. Li Bassi, M. Passoni, C.E. Bottani *Physical Review B*, **79**, 195402 (2009) ISSN: 1098-0121
47. M. Passoni, F. Donati, A. Li Bassi, C. S. Casari, and C. E. Bottani *Physical Review B*, **79**, 045404 (2009) ISSN: 1098-0121
48. M. Passoni, M. Lontano, *Physical Review Letters* **101**, 115001 (2008)
49. V. Russo, A. Bailini, M. Zamboni, M. Passoni, C. Conti, C.S. Casari, A. Li Bassi, C.E. Bottani, *Journal of Raman Spectroscopy* **39**, 205-210 (2008)

ADDITIONAL INFORMATION

Referee for International Journals (ISI - Scopus)	I serve as referee more than 20 international journals, including: <i>Nature Physics</i> , <i>Nature Communications</i> , <i>PRL</i> , <i>PRE</i> , <i>PRB</i> , <i>PRA</i> , <i>PRX</i> , <i>Phys. Plasmas</i> , <i>Phys. Lett. A</i> , <i>Europhys. Letters</i> , <i>New J. Physics</i> , <i>Nanotechnology</i> ,
Contributions to international conferences and schools	I have presented results of my research in many international conferences, including more than 10 invited presentations/seminars. Since 2007, I have been also invited as lecturer at several advanced international schools (+1 italian Master on Nuclear Engineering).
Funding ID	I obtained research contracts as PI/responsible in different fields, including: a €1.887.500 project (ERC-Co Grant 2014 project ENSURE), a €440.000 project selected among about 4000 proposals (FIRB-Futuro in Ricerca Project SULDIS : SUperintense Laser Driven Ion Sources) and an ongoing research collaboration (also within the frame of the EuroFusion Consortium, Euratom H2020) between ENEA, Plasma Physics Institute of CNR and Dept. of Energy of Politecnico di Milano, besides contributing to other projects.
Ph.D./Master Thesis Supervisor	I have been supervising about 35 Master/PhD students & 4 post-docs.
Associations	• Istituto di Fisica del Plasma, CNR • National nuclear physics institute, INFN, Italy. • Member of NEMAS (Center for NanoEngineered Materials and Surfaces) of Politecnico di Milano, "center of excellence" on nanotechnology, accredited by MIUR (Italian Ministry of Research)
Bibliometric record (ISI+Scopus data)	Since 2002, co-author of about 80 papers in peer-reviewed journals, book chapters, conference proceedings. Total number of citations: > 1000. h-Index: 18.

TRATTAMENTO DEI DATI PERSONALI, INFORMATIVA E CONSENSO

Il D.Lgs. 30/6/2003, n. 196 "Codice in materia di protezione dei dati personali" regola il trattamento dei dati personali, con particolare riferimento alla riservatezza, all'identità personale e al diritto di protezione dei dati personali; l'interessato deve essere previamente informato del trattamento .

La norma in considerazione intende come "trattamento" qualunque operazione o complesso di operazioni concernenti la raccolta, la registrazione, l'organizzazione, la conservazione, la consultazione, l'elaborazione, la modifica, la selezione, l'estrazione, il raffronto, l'utilizzo, l'interconnessione, il blocco, la comunicazione, la diffusione, la cancellazione e la distruzione di dati, anche se non registrati in una banca dati.

In relazione a quanto riportato, autorizzo il CNR al trattamento dei dati contenuti nel presente *curriculum vitae* e nella documentazione della quale fa parte integrante

X Si, acconsento

Matteo Passoni

