

PERSONAL INFORMATION

Dr. Amelia Montone

**Staff Scientist**

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Sex female | Date of birth 17/07/1958 | Nationality Italy

Chair of COST Action MP1103 (Nanostructured materials for solid-state hydrogen storage) (2011-2015)

ENEA coordinator of Hydrostore-Industria 2015 (2011-2015).

Management board member of EERA-Joint Programme on Advanced Materials and Processes for Energy Application (AMPEA) from 2012.

President of SISM (Italian Society for Microscopical Sciences) from 2008.

Italian expert for the International Energy Agency's Task 32 "Hydrogen-based energy storage" from 2013.

Member of the European Commission's Set-Plan Initiative on Education and Training/ Working group " Fuel cells and Hydrogen" from 2012.

WORK EXPERIENCE

From 1988 to 2002

Researcher at ENEA, Research Centre of Casaccia, Rome

- Applications of electron microscopy methods to material science.
- SEM and TEM and related spectroscopies (EDS and EELS) in solid state reactions induced by high energy ball milling, high critical temperature superconductors, artificial multilayered films prepared by sputtering, magnetic nanoparticles produced by chemical routes, materials for hydrogen storage

From 2002 to 2013

Staff scientist at ENEA, Research Centre of Casaccia, Rome

- Synthesis, microstructural and thermal characterization on nanocomposite for hydrogen storage
- Board member from 2002 to 2007 of SISM (Italian Society for Microscopical Sciences).
- President of SISM (Italian Society for Microscopical Sciences) from 2008.
- Project scientific leader in national and European projects on hydrogen storage materials.
- ENEA scientific coordinator of Hydrostore-Industria 2015 (2011-2015).
- Management board member of EERA-Joint Programme on Advanced Materials and Processes for Energy Application (AMPEA)
- Chair of the COST Action MP1103 (Nanostructured materials for solid-state hydrogen storage), 25/10/2011-25/10/2015.
- Contract Professor at Viterbo University (2004-2005-2007).
- Editorial Board of Microscopy Research and Technique and of ISRN Material Science
- International Advisory Board member of YUCOMAT Conference from 2005.
- Referee of J. Phys. D: Appl. Phys., Nanotechnology, Material Science Forum, International Journal of Hydrogen Energy, Intermetallics, Materials Chemistry and Physics, Journal of Alloys and Compounds
- International Advisory Board and/or Scientific Programme Committee of MCM 2011, 10th Multinational Congress on Microscopy 2011, EMC 2012, MC 2013, IMC 2014
- Member of the coordination committee of Convenzione Quadro ENEA-Università di Trento from 2010
- Teaching activities for TEDAT project from 2013
- Special issue of International Journal of Hydrogen Energy THE 1ST EUROPEAN EARLY STAGE RESEARCHERS' CONFERENCE ON HYDROGEN STORAGE, 2013
Guest editors: Dr Jasmina Grbovic Novkovic, Dr Amelia Montone, Dr Andreas Zuettel.

EDUCATION AND TRAINING

Degree in Physics “cum laude”, 1984, Rome University “La Sapienza”.

1985-1988: fellowships at CNR, ENEA

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Organisational / managerial skills

- Organizer and director of several tutorial courses
- Leadership: SISM president (450 members), MP1103 COST Action chair (200 members)

Job-related skills

Invited speaker at congresses, schools and workshops, chair at several international conferences.

Tutor of several Ph.D. students, master students and young researchers on electron microscopy and on hydrogen storage

Computer skills

Advanced knowledge of Microsoft Office, Adobe Photoshop, Internet

Publications Author of more than 100 publications in international journals, invited speaker at congresses.
 Presentations 3 patents

Last papers:

- Sandra Kurko, Annalisa Aurora, Daniele Mirabile Gattia, Vittoria Contini, Amelia Montone, Željka Rašković-Lovre, Jasmina Grbović Novaković, Hydrogen sorption properties of MgH₂/NaBH₄ composites, Int.J.Hyd. Energy DOI : 10.1016/j.ijhydene.2013.04.075, 2013
- Montone, A., Aurora, A., Mirabile Gattia, D., Effect of the temperature and of the catalyst on the hollow particle formation in the Mg composites, International Journal of Hydrogen Energy (2013), 38(27), 12146
- Popilevsky, V.M. Skriptyuk, Y. Estrin, A. Dahle, D. Mirabile Gattia, A. Montone, E. Rabkin Hydrogenation-induced microstructure evolution in as cast and severely deformed Mg-10 wt.% Ni alloy, Int. J. of Hydrogen Energy, 2013, 38(27), 12103
- D. Mirabile Gattia, A. Montone, L. Pasquini; Microstructure and morphology changes in MgH₂/expanded natural graphite pellets upon Hydrogen cycling; International Journal of Hydrogen Energy (2013) 38 (4), pp. 1918-1924.
- A. Montone, A. Aurora, D. Mirabile Gattia, M. Vittori Antisari; *Microstructural and Kinetic Evolution of Fe Doped MgH₂ during H₂ Cycling* Catalysts 2012, 2(3), 400-411; doi:10.3390/catal2030400.
- L Pasquini, M Brighi, A Montone, M Vittori Antisari, B Dam, V. Palmisano and E Bonetti,, *Magnesium nanoparticles for Hydrogen Storage: Structure, Kinetics and Thermodynamics* 2012 IOP Conf. Ser.: Mater. Sci. Eng. 38 012001
- A. Montone, A. Aurora, D. Mirabile Gattia, M. Vittori Antisari, "Effect of hydrogen pressure and temperature on the reaction kinetics between Fe-doped Mg and hydrogen gas", Journal of Alloys and Compounds, 509 (SUPPL. 2), pp. S580-S583, 2011
- Pasquini, L., Callini, E., Brighi, M., Boscherini, F., Montone, A., Jensen, T.R., Maurizio, C., Antisari, M.V., Bonetti, E., "Magnesium nanoparticles with transition metal decoration for hydrogen storage", Journal of Nanoparticle Research, 13, Issue 11, 2011, Pages 5727-5737
- S. Agarwal, A. Aurora, A. Jain, A. Montone, "Structural and H₂ sorption properties of MgH 2-10 wt%ZrCrM (M 5 Cu, Ni) nano-composites", Journal of Nanoparticle Research, Volume 13, Issue 11, November 2011, 5719
- Pasquini, L., Montone, A., Callini, E., Antisari, M.V., Bonetti, E. "Formation of hollow structures through diffusive phase transition across a membrane", *Applied Physics Letters* 99 (2), art. no. 021911, 2011
- A. Montone, A. Aurora, D. Mirabile Gattia, M. Vittori Antisari, "On the barriers limiting the reaction kinetics between catalysed Mg and Hydrogen", Scripta Materialia 63, 456-459, 2010
- E. Callini, L. Pasquini, L.H. Rude, T.K. Nielsen, T.R. Jensen, E. Bonetti, Hydrogen storage and phase transformations in Mg-Pd nanoparticles, Journal of Applied Physics 108, 073513 (2010)
- Celino, M., Montone, A., Cleri, F., Aurora, A., Gattia, D.M., Giusepponi, S., Antisari, M.V. Metallographic and numerical studies of the role of catalyst particles of MgH₂-Mg system (2010) Defect and Diffusion Forum, 297-301, pp. 263-268
- Abazović, N., Aurora, A., Contini, V., Mancini, M.R., Montone, A., Vittori Antisari, M., Hydrogen release and microstructure of MgH₂ based composite powders containing a relevant amount of LaNi₅, (2010) Acta Physica Polonica A, 117 (5), pp. 841-848.
- Montone, A., Aurora, A., Gattia, D.M., Antisari, M.V., Phase transformation from Mg to MgH₂ studied by SEM metallography (2010) Materials Research Society Symposium Proceedings, 1216, pp. 166-171
- Shivani Agarwal, Annalisa Aurora, Ankur Jain, I.P. Jain, Amelia Montone, Catalytic effect of ZrCrNi alloy on hydriding properties of MgH₂, Int. J. Hydrogen Energy, 34 (22), pp. 9157-9162, 2009
- L. Pasquini, E. Callini, E. Piscopiello, A. Montone, M. Vittori Antisari, and E. Bonetti, "Metal-hydride transformation kinetics in Mg nanoparticles", *Applied Physics Letters*, 2009, 94, 041918

Invited speaker, last:

- A. Montone, D. Mirabile Gattia, G. Di Girolamo, V. Contini, Compacted Mg-based powders for applications in solid state hydrogen storage, E-MRS 2013 Fall Meeting-Warsaw 16-20 September
- A. Montone, A. Aurora, D. Mirabile Gattia, L. Pasquini, M.Vittori Antisari, MgH₂-based composite compacted powders upon hydrogen cycling, 7th International Symposium Hydrogen and Energy - Stoos, Switzerland 21-25/01/2013
- A.Montone, "Presentation of the COST Action MP1103 "Nanostructured materials for solid-state hydrogen storage", at COST Action MP1004 Meeting: Joint Management Committee/WG's 1-4/Industrial Day Meeting, Versailles 18 April 2013.
- A. Montone, A. Aurora, D. Mirabile Gattia, M. Vittori Antisari, *Ageing effect on MgH₂ nanocomposites*, FM&NT 2012 17-20/04/ 2012 Riga, Latvia.

A. Montone, A. Aurora, D. Mirabile Gattia, M. Vittori Antisari, *Nanostructured Materials for Solid State Hydrogen Storage*, "Graphene Day: fundamentals, electronics, renewable energy Pisa Nest Lab 09/02/2012

A. Montone, A. Aurora, D. Mirabile Gattia, M. Vittori Antisari, *Nanostructured Materials For Solid-State Hydrogen Storage - COST Action MP 11003, NANOTECHITALY 2012 21-23-11/2012 Venezia*