Andrea Baldi
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Department of Physics and Astronomy
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Linkedin: `https://nl.linkedin.com/in/andrea-baldi-b096185`

Education

- *VU University Amsterdam*
  Ph.D. in Physics, March 2010
- *Sapienza University of Rome*
  B.S. in Chemistry, M.S. in Inorganic Chemistry, May 2005 (110/110 *cum laude*)

Research experience

- *Vrije Universiteit Amsterdam (Mar 2020 - present)*
  Associate Professor in the "PhotoConversion Materials" section.
- *Dutch Institute for Fundamental Energy Research (Feb 2015 - Feb 2020)*
  Group Leader of the "Nanomaterials for Energy Applications" laboratory at the Dutch Institute For Fundamental Energy Research (DIFFER), investigating nanotechnology approaches to energy storage and conversion.
  - Wet chemical and light-driven synthesis of metal and semiconducting nanomaterials;
  - Plasmonic sensing of chemical and physical processes at the nanoscale;
  - Single-particle dark-field scattering spectroscopy;
  - Super-resolution localization fluorescence microscopy;
  - Environmental TEM study of hydrogen absorption in single nanoparticles.
- *Stanford University (Feb 2011 - June 2015).*
  Mentor: prof. Jen Dionne
  Visiting Postdoctoral Researcher and FOM YES!-Fellow in the Department of Materials Science and Engineering, investigating a single-particle plasmonic approach to energy conversion and storage.
  - Environmental TEM study of hydrogen storage in individual palladium nanoparticles.
  - Energy conversion: solar fuel generation with plasmon-enhanced photocatalysts.

- *Delft University of Technology (Feb 2010 - Jan 2011).*
  Mentor: prof. dr. Bernard Dam
  Postdoctoral fellow in the Department of Chemical Engineering, investigating hydrogen absorption in ultra-thin magnesium layers, with applications as hydrogen storage and sensing devices.
  - Deposition of ultra-thin ($<$ 10 nm) Mg layers.
  - Characterization of Mg thin films by means of optical spectroscopy, hydrogenography, x-ray diffraction, x-ray and neutron reflectometry.
- *VU University Amsterdam (Sep 2005 - Jan 2010)*
  Ph.D. thesis advisor: prof. dr. Ronald Griessen
  Graduate student in the Department of Physics and Astronomy, investigating the optical, structural and electrical properties of Mg-based switchable mirrors.
  - Thin films deposition: inert and reactive magnetron sputtering, thermal evaporation.
  - Thin films characterization: hydrogen sorption properties, optical spectroscopy (IR, Visible, near-UV), x-ray diffraction, x-ray reflectometry, EXAFS, transport properties of thin films.
  - Synchrotron experience: EXAFS at European Synchrotron Radiation Facility (France) and Deutsches Elektronen-Synchrotron (Germany), neutron reflectometry at Rutherford Appleton Laboratory (UK).
- *Sapienza University of Rome (March 2004 - May 2005)*
  Master thesis advisor: prof. Daniele Gozzi
  Plasma-enhanced hydrogen gas loading of palladium rods: volumetric measurements, changes in electrical resistance and dilation of Pd rods. Thermogravimetric Analysis and B.E.T. surface measurements.

Grants and Honors

- May 2018, DIFFER strategic funds for intergroup collaboration (200 k€) for the proposal entitled "Cavity enhanced nanochemistry" (shared equally with prof. Jaime Gómez Rivas at TU/e)
- February 2018: NWO funds for DIFFER-AMOLF collaboration (250 k€) for the proposal entitled "Direct versus indirect mechanism of plasmon-driven catalysis" (shared equally with prof. Erik Garnett at AMOLF)
- May 2017: NWO Vidi (800 k€) for the proposal entitled "Hot! Hot! Hot! Fundamentals of plasmon catalysis"
- July 2014: FOM Program (1.44 M€) for the proposal entitled "Photosynthesis of nanomaterials: developing nanostructured photocatalysts for solar fuel generation using light" (shared equally with dr. Erik Garnett at AMOLF)

- 2011: Fellowship for Young Energy Scientists (YES!) from the Dutch Foundation for Fundamental Research on Matter (FOM) (483 k€).
- Jan 2008: 9 months grant for abroad studies in Chemistry, from the University of Rome "La Sapienza": first classified.
- HYSYDays 2007, Jun 6-8, 2007, Turin, Italy: participation grant as one of the 20 best rated papers.
- from 1999 to 2003, annual grant from ADISU (Azienda per il Diritto allo Studio Universitario) for academic merits.

Teaching

- Jun 2021: "Innovation Project Energy" for 1st-year bachelor students of Science, Business, and Innovation: energy storage and energy transmission.
- Mar 2021: "Sustainable Energy: Biomass and Biofuels" for 1st-year bachelor students of Science, Business, and Innovation: course coordinator, responsible for half of the lectures and all werkcolleges.
- Jan 2021: "Current Sustainable Energy Technologies" for 1st-year master students of Physics, Chemistry, and Science, Business, and Innovation.
- Jun 2020: "Innovation Project Energy" for 1st-year bachelor students of Science, Business, and Innovation: energy storage and energy transmission.
- Mar 2020: "Sustainable Energy: Biomass and Biofuels" for 1st-year bachelor students of Science, Business, and Innovation: course coordinator, responsible for half of the lectures and all werkcolleges.

Teaching assistant and occasional lecturer

- Functional and Nanomaterials (Jun 2019, Fontys University of Applied Sciences)
- Functional and Nanomaterials (Dec 2017, Fontys University of Applied Sciences)
- Nanophotonics (Apr 2017, Eindhoven University of Technology)
- Nanophotonics (Apr 2016, Eindhoven University of Technology)
- Materials Chemistry (Dec 2012, Stanford University)
- Sustainable Energy (Feb - Apr 2009, VU University Amsterdam)
- Energy Science (Sep - Dec 2008, VU University Amsterdam)
- Innovation Project Energy: Wind Energy (Jun 2008, VU University Amsterdam)
- Thermodynamics and Statistical Physics (Sep - Dec 2007, VU University Amsterdam)

Students mentor

- PhD thesis supervisor of: Francesco Verdelli, (since Sep 2019, co-supervision with prof. Jaime Gómez Rivas), Ruben Hamans, (since Jan 2018), Matteo Parente, (since Sep 2015), Rifat Kamarudheen, (graduated on July 6, 2020).

- Master thesis supervisor of: Matteo Marchesini (Dec 2020), Andrea Ferreira de Abreu (Sep 2018), Ruben Hamans (Dec 2017), Gabriel Castellanos (Oct 2017), Christiaan Boelsma (Dec 2010), Felix Claessen (Sep 2010).
- Bachelor thesis supervisor of: Donna Sandtke (July 2021), Anne Askey (Jun 2020), Max van Helvert (Jun 2020), Mike Nuijen (Feb 2020), Guus Aalbers (Jan 2020), Joost Reinders (Jun 2019), Thomas Groeneveld (Feb 2019), Daphne Sayasipli (Jun 2018), Ruth Verbroekken (Jun 2016), Jonna Zwetsloot (Jun 2009), Felix Claessen (Jul 2008).

Other academic activities

- Since September 2020, Chair of the NWO committee for Incentive Grants for Women in STEM
- Since March 2020, Chair of the Opleidingscommissie (OLC) for the bachelor and master programs of Science and Business Innovation (SBI)
- Member of the working group advisory committee Physics for Technology and Instrumentation (since Jan 2019), Member of the working group advisory committee Chemistry of Materials (since Dec 2018), Member of the Platform Academische Natuurkunde and of its core team (Jan 2018 - Jan 2020).
- Reviewer: Science, Nature Materials, Nature Communications, ACS (JACS, Nano Letters, ACS Photonics, ACS Energy Letters, ACS Nano, Accounts of Chemical Research, ACS Sensors, ACS Catalysis, Journal of Physical Chemistry, ACS Applied Nano Materials), RSC (Nanoscale), AIP (Applied Physics Letters, Journal of Applied Physics), Elsevier (International Journal of Hydrogen Energy, Journal of Alloys and Compounds).
- Proposal reviewer and jury member for: SNF Eccellenza 2020, NWO Veni 2020, NWO Rubicon (2019-2 and 2018-1), Polish National Science Center (2017), FOM Projectruimte (2016-2), US Air Force Office of Scientific Research (2013).
- Member of the Organizing Committee of the 2021 Dutch Physics Conference "Physics @ Veldhoven" (representing Materials Physics)
- Organizer and chair of the focus session "Plasmonics for Chemistry" at CHAINS in Veldhoven, Netherlands (2018).
- Session chair at: MRS Fall in Boston, USA (2016); EMRS Fall in Warsaw, Poland (2016); 2018 DPG Meeting in Berlin, Germany (2018).
- Committee member of the 2017-2018 Nano-Optics and Plasmonics Subcommittee of the OSA Conference on Lasers and Electro-Optics (CLEO).
- PhD thesis opponent of: Christiaan Boelsma (TUDelft, 2017), Svetlana Syrenova (Chalmers, 2017), Kasper Trans Møller (Aarhus University, 2017), Jessi van der Hoeven (Utrecht University, 2019), Evgenia Kontoleta (Universiteit van Amsterdam, 2019), Mathias Jørgensen (Aarhus University, 2019), Evgenia Kontoleta (Universiteit van Amsterdam, 2019), Yuyang Wang (Eindhoven University of Technology, 2020), Ivan Bordacchini (ICFO, 2020).
- Initiator and member of the DIFFER diversity taskforce.

Outreach activities

- Presentation entitled "Plasmonics for Chemistry" at the TU/e Docentendag Scheikundige Technologie, February 1, 2017, Eindhoven, Netherlands
- A. Baldi, E. Langereis, Energy Cafe - Energy reality check, Team Energy TU/e, December 1, 2016, Eindhoven, Netherlands
- A. Baldi, Talk entitled "Nanomaterials for Energy Applications" at the Groningen 2016 PhD Day "Unity in Diversity", September 9, 2016, Groningen, Netherlands
- Participation as panelist and discussion leader at the FOM Gender in Physics Day, November 1, 2016, Amersfoort, Netherlands
- Invited talk at the 2015 FOM Young Scientists' Day, December 10, 2015, Amsterdam, Netherlands

Languages

- Italian, native language;
- English, excellent written and spoken;
- Dutch, basic.

Publications (Google Scholar)

35. G. Kumari, R. Kamarudheen, E. Zoethout, and **A. Baldi**
Photocatalytic Surface Restructuring in Individual Silver Nanoparticles
ACS catalysis 11, 3478-3486 (2021)

34. R. F. Hamans, M. Parente,and **A. Baldi**
Super-resolution Mapping of a Chemical Reaction Driven by Plasmonic Near-fields
Nano Letters 21, 2149-2155 (2021)

33. E. Cortés, L.V. Besteiro, A. Alabastri, **A. Baldi**, G. Tagliabue, A. Demetriadou, and P. Narang
Challenges in Plasmonic Catalysis
ACS Nano 14, 16202–16219 (2020)

32. R.F. Hamans, R. Kamarudheen, and **A. Baldi**
Single Particle Approaches to Plasmon-Driven Catalysis
Nanomaterials 10, 2377 (2020)

31. R. Kamarudheen, G. Kumari, and **A. Baldi**
Plasmon-driven synthesis of individual metal@ semiconductor core@ shell nanoparticles
Nature Communications 11:3957 (2020)

30. R. Kamarudheen, G. J. W. Aalbers, R. F. Hamans, L. P. J. Kamp, **A. Baldi**
Distinguishing Among All Possible Activation Mechanisms of a Plasmon-Driven Chemical Reaction
ACS Energy Letters 5, 2605-2613 (2020)

29. M. Parente, M. van Helmert, R. F. Hamans, R. Verbroekken, R. Sinha, A. Bieberle-Hütter, and **A. Baldi**
Simple and Fast High-Yield Synthesis of Silver Nanowires
Nano Letters 20, 5759-5764 (2020)

28. G. Baffou, I. Bordacchini, **A. Baldi**, and Romain Quidant
Simple experimental procedures to distinguish photothermal from hot-carrier processes in plasmonics
Light: Science & Applications 9, 1-16 (2020)

27. N. van Hoof, M. Parente, **A. Baldi**, and J. Gómez Rivas
Terahertz Time-Domain Spectroscopy and Near-Field Microscopy of Transparent Silver Nanowire Networks
Advanced Optical Materials 1900790 (2020)

26. R. F. Hamans, M. Parente, G. W. Castellanos, M. Ramezani, J. Gómez Rivas, and **A. Baldi**
Super-resolution Mapping of Enhanced Emission by Collective Plasmonic Resonances
ACS Nano 13, 4514-4521 2019

25. **A. Baldi**, L. P. A. Mooij, V. Palmisano, H. Schreuders, G. Krishnan, B. J. Kooi, B. Dam, and R. Griessen
Elastic versus alloying effects in Mg-based hydride films
Physical Review Letters 121, 255503 (2018)

24. R. Kamarudheen, G. Castellanos Gonzales, L. Kamp, H. Clercx, and **A. Baldi**
Quantifying photothermal and hot charge carrier effects in plasmon-driven nanoparticle syntheses
ACS Nano 12, 8447-8455 (2018)

23. M. Parente, S. N. Sheikholeslami, G. V. Naik, J. A. Dionne, and **A. Baldi**
Equilibration of Photogenerated Charge Carriers in Plasmonic Core@Shell Nanoparticles
The Journal of Physical Chemistry C 122, 23631-23638 (2018)

22. F. Hayee, T. C. Narayan, N. Nadkarni, **A. Baldi**, A. L. Koh, M. Z. Bazant, R. Sinclair, and J. A. Dionne
In-situ visualization of solute-driven phase coexistence within individual nanorods
Nature Communications 9, 1775 (2018)

21. T. C. Narayan*, F. Hayee*, **A. Baldi***, A.-L. Koh, R. Sinclair, and J. A. Dionne
Direct visualization of hydrogen absorption dynamics in individual palladium nanoparticles
Nature Communications 8, 14020 (2017)

20. T. C. Narayan*, **A. Baldi***, A.-L. Koh, R. Sinclair, and J. A. Dionne
Reconstructing solute-induced phase transformations within individual nanocrystals
Nature Materials 15, 768-774 (2016)

19. J. A. Dionne, **A. Baldi**, B. Baum, C.-S. Ho, V. Jankovic, G. V. Naik, T. Narayan, J. A. Scholl, and Y. Zhao
Localized fields, global impact: Industrial applications of resonant plasmonic materials
MRS Bulletin 40, 1138-1145 (2015)

18. **A. Baldi***, T. C. Narayan*, A.-L. Koh, and J. A. Dionne
In situ detection of hydrogen-induced phase transitions in individual palladium nanocrystals
Nature Materials 13, 1143-1148 (2014)

17. S. de Man, M. Gonzalez-Silveira, D. Visser, R. Bakker, H. Schreuders, **A. Baldi**, B. Dam, and R. Griessen
Combinatorial method for direct measurements of the intrinsic hydrogen permeability of separation membrane materials
J. Membrane Sci. 444, 70-76 (2013)

16. L. P. A. Mooij, **A. Baldi**, C. Boelsma, K. Shen, M. Wagemaker, Y. Pivak, H. Schreuders, R. Griessen, and B. Dam
Interface Energy Controlled Thermodynamics of Nanoscale Metal Hydrides
Advanced Energy Materials 1, 754-758 (2011)

15. C. Platzer-Björkman, T. Mongstad, **A. Baldi**, J. P. Mæhlen, S. Karazhanov, and A. Holt
Deposition of magnesium hydride thin films using radio frequency reactive sputtering
Thin Solid Films 519, 5949-5954 (2011)

14. **A. Baldi** and B. Dam
Thin film metal hydrides for hydrogen storage applications
J. Mat. Chem. 21, 4021-4026 (2011) (Highlight paper)

13. V. Palmisano, M. Filippi, **A. Baldi**, M. Slaman, H. Schreuders, and B. Dam
An optical hydrogen sensor based on a Pd-capped Mg thin film wedge
Int. J. Hydrogen Energy 35, 12574-12578 (2010)

12. M. Gonzalez-Silveira, R. Gremaud, **A. Baldi**, H. Schreuders, B. Dam, and R. Griessen
Effect of H-induced microstructural changes on pressure-optical transmission isotherms for Mg-V thin films
Int. J. Hydrogen Energy 35, 6959-6970 (2010)

11. **A. Baldi**, G. K. Pálsson, M. Gonzalez-Silveira, H. Schreuders, M. Slaman, J. H. Rector, G. Krishnan, B. J. Kooi, G. S. Walker, M. W. Fay, B. Hjörvarsson, B. Dam, and R. Griessen
Mg/Ti multilayers: Structural and hydrogen-absorption properties
Phys. Rev. B 81, 224203 (2010)

10. H. Leegwater, H. Schut, W. Egger, **A. Baldi**, B. Dam, and S. W. H. Eijt
Di-vacancies and the hydrogenation of Mg-Ti films with short range chemical order
Appl. Phys. Lett. 96, 121902 (2010)

9. **A. Baldi**
   Magnesium and Titanium: "The odd couple". Local order and stress influence on the hydrogen sorption properties of Mg-Ti thin films
   Ph.D. thesis, March 2010, ISBN: 978 90 8659 440 5, pdf

8. **A. Baldi**, V. Palmisano, M. Gonzalez-Silveira, Y. Pivak, M. Slaman, H. Schreuders, B. Dam, and R. Griessen
   Quasi-free Mg-H thin films
   Appl. Phys. Lett. 95, 071903 (2009)

7. **A. Baldi**, M. Gonzalez-Silveira, V. Palmisano, B. Dam, and R. Griessen
   Destabilization of the Mg-H system through elastic constraints
   Phys. Rev. Lett. 102, 226102 (2009)

6. **A. Baldi**, R. Gremaud, D. M. Borsa, C. P. Baldé, A. M. J. van der Eerden, G. L. Kruijtzer, P. E. de Jongh, B. Dam, and R. Griessen
   Nanoscale composition modulations in $Mg_yTi_{1-y}H_x$ thin film alloys for hydrogen storage
   Int. J. Hydrogen Energy 34, 1450-1457 (2009)

5. R. Gremaud, **A. Baldi**, M. Gonzalez-Silveira, B. Dam, and R. Griessen
   Chemical short-range order and lattice deformations in $Mg_yTi_{1-y}H_x$ thin films probed by hydrogenography
   Phys. Rev. B 77, 144204 (2008)

4. **A. Baldi**, D. M. Borsa, H. Schreuders, J. H. Rector, T. Atmakidis, M. Bakker, H. A. Zondag, W. G. J. van Helden, B. Dam, and R. Griessen
   Mg-Ti-H thin films as switchable solar absorbers
   Int. J. Hydrogen Energy 33, 3188-3192 (2008)

3. D. M. Borsa, R. Gremaud, **A. Baldi**, H. Schreuders, J. H. Rector, B. Kooi, P. Vermeulen, P. H. L. Notten, B. Dam, and R. Griessen
   Structural, optical, and electrical properties of $Mg_yTi_{1-y}H_x$ thin films
   Phys. Rev. B 75, 205408 (2007)

2. **A. Baldi**, F. Di Pascasio, and D. Gozzi
   H_2 cold plasma on Pd/H system at low hydrogen pressure
   Appl. Phys. Lett. 89, 051918 (2006)

1. D. M. Borsa, **A. Baldi**, M. Pasturel, H. Schreuders, B. Dam, R. Griessen, P. Vermeulen, and P. H. L. Notten
   Mg-Ti-H thin films for smart solar collectors
   Appl. Phys. Lett. 88, 241910 (2006)

* Equal author contribution

Invited talks

37. **A. Baldi**, *Plasmon-driven chemical reactions: photothermal effects, hot charge carriers, and near-fields*, AMOLF Nanophotonics Colloquium, June 17, 2020, Amsterdam, The Netherlands

36. **A. Baldi**, *Plasmonics for chemistry: sensing and driving chemical reactions at the nanoscale using light*, Physics@Veldhoven 2020, January 22, 2020, Veldhoven, The Netherlands

35. **A. Baldi**, *Sensing and driving chemical reactions with plasmonic nanoparticles*, E-MRS Fall 2019, September 18, 2019, Warsaw, Poland

34. **A. Baldi**, *In-situ TEM studies of hydrogen absorption in single nanocrystals*, DSL2019 - 15th International Conference on Diffusion in Solids and Liquids, June 25, 2019, Athens, Greece

33. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, Invited seminar at the Sapienza University of Rome, June 18, 2019, Rome, Italy

32. **A. Baldi**, *Photothermal versus hot charge carrier effects in plasmon-driven nanoparticle syntheses*, PIERS 2019 Rome - PhotonIcs & Electromagnetics Research Symposium, June 17, 2019, Rome, Italy

31. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, Invited seminar at the Eindhoven University of Technology, June 13, 2019, Eindhoven, The Netherlands

30. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, Invited seminar at the National Institute of Standards and Technology, May 13, 2019, Gaithersburg (MD), USA

29. **A. Baldi**, *Plasmonic Metal Nanoparticles*, Studium Generale at Fontys University of Applied Sciences, April 15, 2019, Eindhoven, The Netherlands

28. **A. Baldi**, *Hydrogen storage in single metal nanocrystals*, Invited seminar at the Max Planck Institut für Eisenforschung, November 29, 2018, Dusseldorf, Germany

27. **A. Baldi**, *Hydrogen storage in individual metal nanoparticles*, Invited seminar at the Max Planck Institute for Intelligent Systems, November 12, 2018, Stuttgart, Germany

26. **A. Baldi**, *Hydrogen storage in individual nanoparticles*, CIMTEC - 8th Forum on New Materials, June 12, 2018, Perugia, Italy

25. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, Invited seminar at the LMPV Meeting at AMOLF, May 23, 2018, Amsterdam, The Netherlands

24. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, Invited seminar at the Helmholtz-Zentrum Berlin, March 14, 2018, Berlin, Germany

23. **A. Baldi**, *Hydrogen storage in individual metal nanoparticles*, DPG Spring Meeting, March 13, 2018, Berlin, Germany

22. **A. Baldi**, *Hydrogen storage in single metal nanocrystals*, Invited seminar at Aarhus University, December 14, 2017, Aarhus, Denmark

21. **A. Baldi**, *Nanomaterials for energy applications: a single particle approach*, 4TU-HTM Meeting, October 13, 2017, Utrecht, The Netherlands

20. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, Invited seminar at ICMS, October 6, 2017, Eindhoven, The Netherlands

19. **A. Baldi**, *Hydrogen storage in single metal nanocrystals*, Invited seminar at Chalmers University, September 5, 2017, Goteborg, Sweden

18. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, Invited seminar at UTwente, July 12, 2017, Enschede, The Netherlands

17. **A. Baldi**, *In-situ transmission electron microscopy study of battery nanomaterials*, NEVAC Day 2017, May 12, 2017, Eindhoven, The Netherlands

16. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, Invited talk at Stanford University, May 3, 2017, Stanford (CA), USA

15. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, Caltech Applied Physics Seminar, April 28, 2017, Pasadena (CA), USA

14. **A. Baldi**, *In-situ TEM study of nanomaterials for energy storage applications*, RAPID Symposium 2017, Eindhoven University of Technology, Netherlands

13. **A. Baldi**, *Reconstructing hydrogen-induced phase transitions in individual nanocrystals*, MRS Fall 2016, November 27-December 2, 2016, Boston (MA), USA

12. **A. Baldi**, *Hydrogen-induced phase transformations in single nanocrystals*, E-MRS Fall 2016, September 19-22, 2016, Warsaw, Poland

11. **A. Baldi**, T. C. Narayan, A.-L. Koh, R. Sinclair, and J. A. Dionne, *Reconstructing phase transitions within individual nanoparticles using in-situ TEM*, Stanford-Chalmers Workshop on Advancing Materials Innovatively, December 14-15, 2015, Gothenburg, Sweden

10. **A. Baldi**, *Energy storage in nanomaterials*, CHAINS 2015: Chemistry Matters for the Future, December 1-2, 2015, Veldhoven, Netherlands

9. **A. Baldi**, *In-situ TEM study of hydrogen absorption in single Pd nanoparticles*, Gordon Research Conference - Hydrogen-Metal Systems, July 12-17, 2015, Easton (MA), USA

8. **A. Baldi**, *Measuring hydrogen storage in individual palladium nanocrystals*, Physics@FOM, January 20-21, 2015, Veldhoven, Netherlands

7. **A. Baldi**, *Spectroscopy of single nanoparticles for energy conversion and storage*, Joint Center for Artificial Photosynthesis (JCAP North), May 19, 2014, Berkeley, USA

6. **A. Baldi**, *Plasmon photocatalysis*, DIFFER Opening Symposium, April 16, 2012, Nieuwegein, Netherlands

5. **A. Baldi**, *Solar fuel from plasmonic nanoparticles? YES!*, Energy for Next Generations - Sustainable Solutions, November 4-5, 2010, Amsterdam, Netherlands

4. **A. Baldi**, *Tuning the thermodynamics of nanosized metal-hydrides for hydrogen storage applications*, Lawrence Berkeley National Laboratories, March 17, 2010, Berkeley, USA

3. **A. Baldi**, *Tuning the thermodynamics of metal hydrides at the nanoscale*, Physics@FOM, January 19-20, 2010, Veldhoven, Netherlands

2. **A. Baldi**, *Mg-Ti multilayers: nanostructured hydrogen-storage alloys*, Gordon Research Conference - Hydrogen-Metal Systems, July 12-17, 2009, Lucca, Italy

1. **A. Baldi**, *Mg-Ti multilayers: nanostructured hydrogen-storage alloys*, BCA Annual Spring Meeting, April 21-23, 2009, University of Loughborough, UK

Talks

14. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, Plasmonica 2019, June 19, 2019, Napoli, Italy

13. **A. Baldi**, *Plasmonics for Chemistry: sensing and controlling chemical reactions using plasmons*, NextGenChem 2017, June 2, 2017, Utrecht, Netherlands

12. **A. Baldi** and J. A. Dionne, *Auto-correlated photo-catalysis of core@shell Ag@TiO2 individual nanoparticles*, 2013 MRS Spring Meeting & Exhibit, April 1-5, 2013, San Francisco (CA), USA

11. **A. Baldi** and J. A. Dionne, *In-situ single particle plasmon photocatalysis*, 2012 MRS Spring Meeting & Exhibit, April 9-13, 2012, San Francisco (CA), USA

10. **A. Baldi**, *Tuning the thermodynamics of nanosized metal-hydrides for hydrogen storage applications*, ACS 239$^{\text{th}}$ National Meeting, March 21-25, 2010, San Francisco (CA), USA

9. **A. Baldi**, M. Gonzalez-Silveira, V. Palmisano, Y. Pivak, M. Slaman, J. H. Rector, H. Schreuders, B. Dam and R. Griessen, *Tuning the thermodynamics of metal hydrides in nanosized Mg layers*, ACTS Sustainable Hydrogen Conference 2009, November 4-5, 2009, Ede, Netherlands

8. **A. Baldi**, M. Gonzalez-Silveira, V. Palmisano, R. Gremaud, M. Slaman, H. Schreuders, J. H. Rector, B. Dam and R. Griessen, *Mg-Ti multilayers: nanostructured hydrogen-storage alloys*, ACTS Sustainable Hydrogen Conference 2008, October 23-24, 2008, Ede, Netherlands

7. **A. Baldi**, R. Gremaud, B. Dam and R. Griessen, *The Mg-Ti-H system: an accident of nature*, MH2008, June 24-28, 2008, Reykjavik, Iceland

6. **A. Baldi**, R. Gremaud, M. Gonzalez-Silveira, C. P. Baldé, A. M. J. van der Eerden, H. Schreuders, J.H. Rector, P. E. de Jongh, B. Dam and R. Griessen, *The Mg-Ti-H system: an accident of nature*, The Advances in Hydrogen and Fuel Cell Research, May 22, 2008, ECN Petten, Netherlands

5. **A. Baldi**, *Much ado about nothing? Scaling and Universality in Proportional Elections*, Physics Journal Club, Department of Physics, Vrije Universiteit, March 11, 2008, Amsterdam, Netherlands

4. **A. Baldi**, R. Gremaud, M. Gonzalez-Silveira, C. P. Baldé, A. M. J. van der Eerden, H. Schreuders, J.H. Rector, P. E. de Jongh, B. Dam and R. Griessen, *The Mg-Ti-H system: an interesting accident of nature*, Physics@FOM, January 22-23, 2008, Veldhoven, Netherlands

3. **A. Baldi**, R. Gremaud, D. M. Borsa, H. Schreuders, J.H. Rector, B. Dam and R. Griessen, *The Mg-Ti-H system: an interesting accident of nature*, ACTS Sustainable Hydrogen Conference 2007, November 7-8, 2007, Nunspeet, Netherlands

2. **A. Baldi**, D. M. Borsa, H. Schreuders, J.H. Rector, T. Atmakidis, M. Bakker, H.A. Zondag, W.G.J. van Helden, B. Dam and R. Griessen, *Mg-Ti-H thin films as switchable solar absorbers*, HYSYDays 2007, June 6-8, 2007, Turin, Italy

1. **A. Baldi**, D. M. Borsa, M. Pasturel, H. Schreuders, J. H. Rector, M. Slaman, B. Dam and R. Griessen, *Large optical absorption contrast in Mg-Ti-H thin films*, VII International Meeting on Electrochromism (IME7), September 3-7, 2006, Istanbul, Turkey

Posters

10. **A. Baldi**, T. C. Narayan, F. Hayee, A. L. Koh, R. Sinclair, J. A. Dionne, *Hydrogen absorption dynamics in individual palladium nanocrystals*, Gordon Research Conference - Hydrogen-Metal Systems, July 16-21, 2017, Stonehill College, Easton (MA), USA

9. **A. Baldi**, T. C. Narayan, A.-L. Koh, R. Sinclair, and J. A. Dionne, *In-situ TEM study of phase transitions in individual palladium hydride nanocrystals*, Physics@FOM, January 17-18, 2016, Veldhoven, Netherlands

8. **A. Baldi**, S. N. Sheikholeslami, T. C. Narayan and J. A. Dionne, *In-situ and TEM-correlated photocatalysis on individual Ag@TiO_2 nanoparticles*, Gordon Research Conference - Renewable Energy: Solar Fuels, January 19-24, 2014, Ventura, USA

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