

**Name and Surname:** Jasmina Grbović Novaković



**Academic or scientific position:** Full Research Professor

**Affiliation:** Vinča Institute of Nuclear Sciences, National Institute of the Republic of Serbia  
Laboratory of Physics,  
POB 522, Belgrade 11 000, Republic of Serbia

**Current position:** Head of the National Centre of Excellence for Hydrogen and Renewable Energy  
Associated Editor of Gas Science and Engineering

**Past position:** Deputy Director in charge of science in the Laboratory of Physics  
Coordinator of Program Board of Vinča Institute of Nuclear Sciences

**Citation and h factor:** 1500 and 25 (Google Scholar)

**Current research interest:** Mechanochemical synthesis of materials  
Ion beam modification of materials  
Development of hydrogen storage materials  
Development of electrochemical sensors based on raw materials  
Development of equipment for materials characterization

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## **EDUCATION**

**2008**, postdoctoral position in ENEA Casaccia, Rome, Italy

**2005**, PhD in physical chemistry, University of Belgrade, Faculty of physical chemistry  
Theme: Kinetics of hydride formation in systems Mg-C, Mg-Fe, Mg-C-Pd (in Serbian)

**2003**, magisterium in physical chemistry, University of Belgrade, Faculty of physical chemistry,  
Theme: "Carbon /carbon composites as a supporter for oxygen electrode for application in Zn/air fuel cell"

**1999**, BSc in physical chemistry, University of Belgrade, Faculty of physical chemistry,  
Theme: "Investigation of kinetic reaction of  $[\text{Fe}(\text{CN})_4]^{4-}/[\text{Fe}(\text{CN})_4]^{3-}$  electrode in the aqueous solution of 0,5M  $\text{Na}_2\text{SO}_4$  on Pt RDE"

## **MANAGEMENT OF PROJECT SCIENCE AND SMEs**

**2018 - Leader** of the project: Use of natural clays as electrochemical sensors

**2018 - Leader** of the project: Hydrogen storage in composite materials based on minerals

### **MANAGEMENT OF NATIONAL PROJECT**

**2020-2021 Leader of Proof of Concept project:** From modified pyrophyllite - natural clay to electrochemical sensors for detection of pesticide traces in food and water (Project Id=5415)- Innovation fund of Serbia

**2017-2018 Leader of Technology transfer facility project** - Hydrogen Storage Analyser Innovation Fund of Serbia

**2010-2018 Leader of the work package:** Experimental and theoretical investigation of materials for hydrogen storage at project Synthesis, processing and characterization of nanostructured materials for application in the fields of energy, mechanical engineering, environment and biomedicine

**2006-2010 Leader of Task** Synthesis and modification of magnesium based materials for hydrogen storage, within national project Synthesis and characterization of nanostructured metallic and intermetallic compounds and their composites”

### **LEADER OF INTERNATIONAL PROJECT**

**2019-2023 MC member of COST ACTION CA18112 - Mechanochemistry for Sustainable Industry**

**2019-2021 MC member of COST Action IG15102** - Title Innovative and sustainable Technologies for reducing critical raw materials dependence for Cleaner Transportation Applications

**2015-2019 MC member of COST ACTION CA15102** Solutions for Critical Raw Materials Under Extreme Conditions

**2019-2020 Bilateral project Serbia-Montenegro** Synthesis and characterization of PCM (phase change materials) materials: the path to a hydrogen energy-based economy according

**2016-2017 Bilateral project Serbia-France** Nanostructured composite materials for solid-state hydrogen storage

**2016-2017 Bilateral project Serbia–Croatia** Ammonium boranes and its derivatives for solid state hydrogen storage

**2011-2015 MC member** and in charge for Early stage researchers (ESR) and small-term scientific missions (STSM) at **COST Action MP1103 Nanostructured materials for solid-state hydrogen storage**

**2010-2012 Bilateral project Serbia -Spain:** Effects of low energy ion irradiation on the catalytic activity magnesium and magnesium-based intermetallic compounds

**2010-2012 Bilateral project Serbia -Russia:** Ion beam induced nanostructuring of silicon-based and materials for hydrogen storage (WP leader)

**2009 International project** Inelastic neutron scattering study of the microscopic proton dynamics in ion-bombarded MgH<sub>2</sub>

### **PARTICIPATION IN NATIONAL PROJECTS**

**2010 - 2018** Synthesis, processing, and characterization of nanostructured materials for application in the fields of energy, mechanical engineering, environment, and biomedicine”

**2006 - 2010** Synthesis and characterization of nanostructured metallic and intermetallic compounds and their composites”

**2002 - 2005** New carbon materials and their composites

### **PARTICIPATION IN INTERNATIONAL PROJECT**

**2012-2013 Bilateral project Serbia - Slovenia:** Microstructural investigation of materials for hydrogen storage and correlation with desorption properties

**2010-2012 Bilateral project Serbia - Russia:** Ion beam-induced nanostructuring of silicon-based materials for hydrogen storage

### **EVALUATOR**

- 2020 Evaluator for National Entity for Accreditation and Quality Assurance in Higher Education of Serbia - NEAQA
- Evaluation of the Baltic Research Programme
- Certified evaluator for IPA project
- Evaluator of project related to Funding Multilateral Scientific and Technological Cooperation Projects in the Danube Region
- Evaluator of project related to Funding Bilateral Project funded by the Serbian Ministry of Education, Science and Technological Development
- Expert for Energy in the project Serbian innovates

#### **MEMBERSHIP IN THE SCIENTIFIC BODIES, COMMITTEES, and MANAGEMENT OF SCIENTIFIC SOCIETIES**

**2022 still** Team member for the development of the Strategy of Hydrogen Economy in Serbia

**2020** - Member of the National Commission for the acquisition of scientific titles

**2019** - Coordinator of Program Board of Vinča Institute of Nuclear Sciences

**2019** - Member of the Council of Institutes at Belgrade University

**2018** - Founder and Head of the Centre of Excellence for Hydrogen and Renewable Energy

**2017** - Founder and member of the Advisory Board of Hydrogen Economy Initiative Serbia

**2010-2020** – President of the Serbian Society for Microscopy

**2006-2010** – Secretary General of Serbian Society for Microscopy

**2008-2010** – Secretary General of Vinča Institute Scientific Council

Faculty leader of Hydrogen storage Student Chapter

#### **MEMBERSHIP IN THE PROGRAM COMMITTEES OF CONFERENCES**

- Member of the program committee of the 6th International Symposium on Energy Storage and Conversion 05-08.07.2022, Bol, Brac, Croatia
- Member of the program committee of 5th International Symposium on Energy Storage and Conversion 14-17.09.2021, virtual symposium Turkey,
- Member of the program committee of 4th International Symposium on Energy Storage and Conversion Mugla, Akyaka, Turkey, 11-13.09.2019
- President and member of program and organizing committee 14<sup>th</sup> Multinational Conference on Microscopy MCM2019 Belgrade, Serbia 15-20.9.2019
- President and member of program and organizing committee of 3rd International Symposium on Energy Storage and Conversion Belgrade, Serbia 10-12.10.2018
- President and member of the program and organizing committee of the Joint meeting of the 11<sup>th</sup> Conference of Young Researchers in the Field of Material Science and the 1<sup>st</sup> European Early Stage Researchers Conference of Hydrogen Storage, 03-05. 12. 2012, Belgrade, Serbia
- Member of the program committee of the 10<sup>th</sup> Conference of Young Researchers in the Field of Material Science, 21-23. 12. 2011, Belgrade, Serbia
- Member of the organizing committee of the 7<sup>th</sup> International Conference on Mechanochemistry and Mechanical Alloying, 31.8-04.09. 2011, Herceg Novi, Montenegro
- Member of Program committee of 11<sup>th</sup> Multinational Conference on Microscopy 04.-09.09.2011, Urbino, Italy
- Member of the program committee of the 1<sup>st</sup> Conference of the Serbian Ceramic Society, 17-18. 03.2011, Belgrade, Serbia
- Member of Program and Organizing board of 4<sup>th</sup> Serbian Congress on Microscopy, Belgrade 11-12. October 2010
- Member of the program committee of the 9<sup>th</sup> Conference of Young Researchers in the Field of Material Science, 20-22. 12. 2010, Belgrade, Serbia
- Member of the program committee of the 8<sup>th</sup> Conference of Young Researchers in the Field of Material Science, 21-23. 12. 2009, Belgrade, Serbia

- Member of Program Committee of Joint meeting of 9<sup>th</sup> Multinational Conference on Microscopy 2009 and Dreiländertagung 2009 and chairman of the session M7, Graz, Austria
- Member of Program Committee of National Conference: 7<sup>th</sup> Conference of Young Researchers in Field of Material Science, Belgrade, Serbia
- Member of Program and Organizing board of 3rd Serbian Congress on Microscopy, Belgrade, 2007
- Member of Program and Organizing board of national meeting on "50 years of Electron Microscopy in Serbia"

### **REVIEWER OF JOURNAL PAPERS**

International Journal of Hydrogen Energy, Journal of Power Sources, Journal of Alloys and Compounds Ultrasonic Sonochemistry, Journal of Materials Research, Hemijska industrija, Materials Science, Processing and Applied Ceramics, Environmental Engineering and Management Journal, Journal of Nanoscience...

### **MENTOR OF PHD AND MASTER THESIS**

**2021** Supervisor of PhD thesis of Mr. Jing Wang on solid-state hydrogen storage at the School of Chemical Engineering of Technology of Xi'an Jiaotong University, China

**2021** Mentor of PhD thesis of Zorana Sekulić, theme: Uticaj prelaznih metala na strukturu i sorpcione osobine nanokompozita na bazi magnezijum hidrida, Univerzitet Crne Gore, Metalurško-tehnološki fakultet, Podgorica.

**2021** Mentor of master thesis of Katrina Tošić, Karakterizacija termički tretiranog pirofilita,

**2020** Ph.D. thesis of A. Mitrović Rajić, Mechanochemical and thermal modification of pyrophyllite for application in electrochemical sensors and semipermeable membrane, Faculty of Physical Chemistry, University of Belgrade

**2016** Ph.D. thesis of S.Milošević, Faculty of Physical Chemistry, University of Belgrade

Theme: Usage of VO<sub>2</sub>(B) as a catalyst in the dehydration reaction of MgH<sub>2</sub> and as an intercalate material in lithium batteries

**2015** Ph.D. thesis of S.Kurko, Faculty of Physical Chemistry, University of Belgrade

Theme: Influence of boron-induced modification in MgH<sub>2</sub> structure on the dehydrogenation process

**2015** Ph.D. thesis of I. Milanović, Faculty of Physical Chemistry, University of Belgrade

Theme: Synthesis and characterization of complex and metallic hydrides for hydrogen energy applications

**2010** Ph.D. thesis Lj.Matović, Faculty of Physical Chemistry, University of Belgrade

Theme: Change of thermal properties of MgH<sub>2</sub> induced by high-energy ions structural destabilization

### **COMMITTEE MEMBER FOR THE EVALUATION AND DEFENSE OF THE DOCTORAL, MASTER, AND B.Sc DISSERTATION**

**2017** Ph.D. thesis of R. Vujasin, Faculty of Physical Chemistry, University of Belgrade

Theme: Theoretical and experimental study of TiO<sub>2</sub> influence on hydrogen sorption in MgH<sub>2</sub>/Mg system

**2010** Master thesis Ž Rašković Lovre, Faculty of Physical Chemistry, University of Belgrade

Theme: Synthesis and dehydrogenation of MgH<sub>2</sub>/SiC composite/ synthesis and characterization

**2010** B.Sc thesis S. Milošević Faculty of Physical Chemistry, University of Belgrade

Theme: Synthesis and characterization of VO<sub>2</sub> and VO<sub>2</sub>-MgH<sub>2</sub> nanocomposite" / chemical synthesis, hydrogen storage materials

### **EDITOR OF JOURNALS, PROCEEDINGS, AND BOOKS**

**2020** Guest editor of International Journal of Hydrogen Energy–Special issue,

**2018** Editor of book Programme and the book of abstracts from 3rd International Symposium on Materials for Energy Storage and Conversion - mESC-IS 2018

- 2016** Editor of book Program and the Book of Abstracts from Workshop of French, Croatian and Serbian Researchers on Hydrogen Storage and Energy Related Materials
- 2013** Guest editor of International Journal of Hydrogen Energy–Special issue,
- 2012** Guest editor of the book: Novel Perspectives on Hydrogen Storage in Solid Media
- 2011** Editor of the book of abstracts from The 1st Conference of the Serbian Ceramic Society,
- 2010** Editor of the book of abstracts from The 4th Serbian Congress for Microscopy
- 2007** Editor of the book of abstracts from The 3rd Serbian Congress for Microscopy
- 2006** Editor of Monograph 50 years of electron microscopy in Serbia

## **AWARDS**

- 2020** Congress Ambassador of Serbia
- 2018** The best innovative entrepreneur idea Cider of Quince at Pokreni se za posao- GENERATOR
- 2017** Third place at National Forum of Green Ideas for Social Entrepreneurship –TRAG FOUNDATION
- 2009** IAHE outstanding Service Award International Association of Hydrogen Energy
- 2009** IUPAP (International Union of Pure and Applied Physics) Women in Physics Grant
- 2005** S.I.S.M. grant for best paper on Multinational Conference on Microscopy
- 2003** The best poster at the YUCOMAT2003 conference

## **PATENT APPLICATION**

Patent pending PCT/RS2019/000005 No.WO 2020/153861.

## **CIVIC AND SOCIAL ACTIVITIES**

**September 2021 – popularization of science through an** Exhibition of artworks by children from the Dečji gaj kindergarten named “Portraits of scientists and notable personalities from Serbia and the world” in the Gallery of Science and Technology of the Serbian Academy of Sciences and Arts

**July 2019 - Organize The GRC Power Hour which** is designed to address challenges women face in science and issues of diversity and inclusion. The program supports the professional growth of all members of our communities by providing an open forum for discussion and mentoring.

## **CAREER ACHIEVEMENTS**

- In 2022 I became a member of Women in Green Hydrogen
- In 2018 I have founded the Centre of Excellence for Hydrogen and Renewable Energy- CONVINCE
- In 2016 I founded the Hydrogen Initiative of the Republic of Serbia
- In 2006 I re-established the Serbian Society for Microscopy, as a formal successor of the Yugoslav Society for Electron Microscopy
- Member of the Women’s Government of Serbia
- I win two projects related to social entrepreneurship
- I am the mother of three and wife of dr Nikola Novaković

## **LANGUAGES**

Italian (mother tongue), English, Russian, Spanish

## **HOBBY**

Love dancing

## **PROUD OF**

My family and parents and the people from the Centre of Excellence I work with

## **REASON OF SUCCESS**

I am stubborn and do not give up, I make decisions quickly and I have the support of my family, especially my husband

## **BOOKS AND CHAPTERS**

1. V.A. Blagojević, D.G. Minić, J.Grbović Novaković and D.M Minić, Book chapter Hydrogen Energy – Challenges and Perspectives Ch. 1: **Hydrogen Economy: Modern Concepts, Challenges, and Perspectives**, DOI: 10.5772/46098, Intech 2012
2. N. Ivanović, N. Novaković, I. Radisavljević, Lj. Matović, J. Grbović Novaković, **Electronic Principles of Hydrogen Incorporation and Dynamics in Metal Hydrides** *Crystals* **2012**, 2, 1261-1282; doi:10.3390/cryst2031261 in "Hydrogen Storage Alloys" Editor Dr. Hans Hagemann ISSN 2073-4352

## **INVITED TALKS**

1. **J. Grbović Novaković**, S. Kurko, S. Milošević Govedarović, T. Pantić, B. Paskaš Mamula, M. Medić, N. Novaković **Theoretical and experimental approach to destabilization methods for improvement of hydrogen sorption kinetics in Mg based systems** 22<sup>nd</sup> Conference "New Cryogenic and Isotope Technologies for Energy and Environment" - *EnergEn* 2018 Băile Govora, Romania, October 24 – 26, 2018 pg. 134-135
2. **J. Grbović Novaković**, S. Kurko, S. Milošević Govedarović, B. Paskaš Mamula, T. Pantić, R. Vujasin, N. Novaković, **Hydrogen desorption for Mg/MgH<sub>2</sub> modified thin films**, The 21<sup>st</sup> International Conference on Solid Compounds of Transition Elements, SCTE'2018 will take place in Vienna, Austria, from March 25 to 29, 2018. ID number 2016
3. **J. Grbovic Novakovic. Hydrogen energy, fuel cells and hydrogen storage**, Conference Sustainable Transport at RENEXPO 2018. 24-26.4.2018,Belgrade, Serbia.
4. **J.Grbovic Novakovic**, Hydrogen economy – fuel cell and hydrogen storage Tesla Forum, 04.-07.7 2018. Andreljeva, Fruska Gora, Serbia
5. **J Grbovic Novakovic, Hydrogen economy in Serbia –research and development**, Workshop: Hydrogen for sustainable energy, 21.12 2016, Zelena akcija,, Zagreb. Croatia
6. **J.Grbovic Novakovic, Changes in storage properties of hydrides induced by ion irradiation**, 4<sup>th</sup> international conference on radiation interaction with materials and its use in technologies 2012, Kaunas. Lithuania, 14.05-17.05.2012
7. **J.Grbovic Novakovic ,Modification of metal hydrides with heavy ion irradiation** First coordination meeting on the Program of cooperation of Serbia and JINR: Condensed Matter Physics with Ion Beams 25-27.02.2010, Dubna Russia
8. **J.Grbović Novaković**, T. Brdarić, N.Novaković, S Mentus **Hydrogen storage in magnesium based alloys** French-Serbian European summer University: Renewable energy and enviroment-

### **THE TEN MOST IMPORTANT REFERENCES**

1. S. Milošević, S. Kurko, L. Pasquini, Lj. Matović., R. Vujasin, N. Novaković, **J. Grbović Novaković**, Fast hydrogen sorption from MgH<sub>2</sub>-VO<sub>2</sub>(B) composite materials, *Journal of Power Sources* 307 (2016) 481-488
2. D. Milcius, **J. Grbović Novaković**, R. Zostautienė, M. Lelis, D. Girdzevicius, M. Urbonavicius, Combined XRD and XPS analysis of ex-situ and in-situ plasma hydrogenated magnetron sputtered Mg films, *Journal of Alloys and Compounds*, 647 (2015)790-796
3. A. Đukić, U. Jovanović, T. Tuvić, V. Andrić, **J. Grbović Novaković**, N. Ivanović, Lj. Matović, The potential of ball-milled Serbian natural clay for removal of heavy metal contaminants from wastewaters: Simultaneous sorption of Ni, Cr, Cd and Pb ions, *Ceramics International* 39(6) (2013) 7173-7178
4. S. Milošević, Ž. Rašković-Lovre, S. Kurko, R. Vujasin, N. Cvjetičanin, Lj. Matović, **J. Grbović Novaković**, Influence of VO<sub>2</sub> nanostructured ceramics on hydrogen desorption properties from magnesium hydride, *Ceramics International*, 39(1) (2013) 51-56
5. **J. Grbović Novaković**, Preface of the 1st European Early Stage Researchers' Conferences on Hydrogen Storage *International Journal of Hydrogen Energy*, 38 (27) (2013) 12102
6. J. Gulicovski, Ž. Rašković-Lovre, S. Kurko, R. Vujasin, Z. Jovanović, Lj. Matović, **J. Grbović Novaković**, Influence of vacant CeO<sub>2</sub> nanostructured ceramics on MgH<sub>2</sub> hydrogen desorption properties, *Ceramics International* 38 (2) (2012) 1181-1186
7. S. Kurko, B. Paskaš Mamula, Lj. Matović, **J. Grbović Novaković**, N. Novaković, The Influence Of Boron Doping Concentration On MgH<sub>2</sub> Electronic Structure, *Acta Physica Polonica A* 120(2)(2011)238-241
8. **J. Grbović Novaković**, Lj. Matović, S. Milovanović, M. Drvendžija, N. Novaković, D. Rajnović, M. Šiljegović, Z. Kačarević Popović, N. Ivanović, Changes of hydrogen storage properties of MgH<sub>2</sub> induced by heavy ion irradiation, *Int.J.Hyd. Energy* 33(7) (2008) 1876-1879
9. S. Milovanović, Lj. Matović, M. Drvendžija, **J. Grbović Novaković** Hydrogen storage properties of MgH<sub>2</sub> - diatomite composites obtained by high-energy ball milling, *Journal of Microscopy- Oxford*, 232(3) (2008) 522-525.
10. A. Bassetti, E. Bonetti, L. Pasquini, A. Montone, **J. Grbović**, M. Vittori Antisari, Hydrogen desorption from ball milled MgH<sub>2</sub> catalyzed with Fe, *The European Physical Journal B*, 43(2005)19-37

### **FULL LIST OF SCIENTIFIC RESULTS**

#### **Journal papers**

1. Igor Milanović, Sanja Milošević Govedarović, Sandra Kurko, Mirjana Medić Ilić, Dragan Rajnović, Slobodan Cvetković, Jasmina Grbović Novaković Improving of hydrogen desorption kinetics of MgH<sub>2</sub> by NaNH<sub>2</sub> addition: Interplay between microstructure and chemical reaction, *International Journal of Hydrogen Energy*, *International Journal of Hydrogen Energy* 47(69) (2022) 29858-29865

2. Igor Milanović, Sanja Milošević-Govedarović, Miodrag Lukić, Zoran Jovanović, Jelena Rmuš, Anđela Mitrović-Rajić, Jasmina Grbović-Novaković, Sandra Kurko, Study of milling time impact on hydrogen desorption from LiAlH<sub>4</sub>-Fe<sub>2</sub>O<sub>3</sub> composites Processing and Application of Ceramics, 2022 16 (3) (2022) 259-266
3. A. Mitrović Rajić, J. Milićević, J. Grbović Novaković Development of modified pyrophyllite carbon paste electrode for carbendazim detection, Materials and Manufacturing Processes, 2022 <https://doi.org/10.1080/10426914.2022.2136386>
4. Fusheng Yang, Jing Wang Yang Zhang Zhen Wu Zaoxiao Zhang Fengqi Zhao, Jacques Huot Jasmina Grbović Novaković, Nikola Novaković, **Recent progress on the development of high entropy alloys (HEAs) for solid hydrogen storage: A review**, International Journal of Hydrogen Energy 47 (21) (2022) 11236-11249
7. AV Nikezić, JG Novaković Nano/Microcarriers in Drug Delivery: Moving the Timeline to Contemporary - Current Medicinal Chemistry, 2023
8. Slobodan M. Cvetković Tatjana Kaluđerović Radoičić, Jasmina Grbović Novaković, Vlado Kovačević, Zorica R. Lopičić, Vladimir Adamović Mirjana Lj. Kijevčanin, **Renewable hydrogen production perspective in Serbia via biogas generated from food processing wastewaters** Journal of Cleaner Production 363 (2022) 132142
9. Slobodan M. Cvetković, Tatjana Kaluđerović Radoičić, Mirjana Kijevčanin, Jasmina Grbović Novaković, **Life Cycle Energy Assessment of biohydrogen production via biogas steam reforming: Case study of biogas plant on a farm in Serbia** International Journal of Hydrogen Energy, 46(27) (2021) 14130
10. P. Janjatović, O. Erić-Cekić, L. Šiđanin, S. Baloš, M. Dramićanin, J. Grbović Novaković, D. Rajnović. **The Effect of Water Concentration in Ethyl Alcohol on the Environmentally Assisted Embrittlement of Austempered Ductile Irons** *Metals* 11(1) (2021) 94;
11. Nikola Novaković, Sandra Kurko, Jasmina Grbović Novaković, Preface: **The 3rd International Symposium on Materials for Energy Storage and Conversion (mESC-IS2018)**, International Journal of Hydrogen Energy, 45(14) (2020) 7873
12. Tijana Pantić, Igor Milanović, Miodrag Lukić, Jasmina Grbović Novaković, Sandra Kurko, Nikola Biliškov, Sanja Milošević Govedarović, **The Influence Of Mechanical Milling Parameters On Hydrogen Desorption From MgH<sub>2</sub>-WO<sub>3</sub> Composites** International Journal of Hydrogen Energy, 45(14) (2020) 7901-7911
13. S. Kurko, B. Paskas Mamula, J. Grbovic Novkaovic, N. Novakovic **DFT study of boron doped MgH<sub>2</sub>: bonding mechanism, hydrogen diffusion and desorption**, International Journal of Hydrogen Energy,, 45(14) (2020) 7947-7957
14. Jasmina Grbović Novaković, Nikola Novaković, Sandra Kurko, Sanja Milošević Govedarović Tijana Pantić, Bojana Paskaš Mamula, Katarina Batalović, Jana Radaković, Jelena Rmuš, Marina Shelyapina, Nataliya Skryabina, Patricia de Rango, Daniel Fruchart

**Influence of Defects on the Stability and Hydrogen-Sorption Behavior of Mg-Based Hydride**, ChemPhysChem 20(10) (2019) 1216-1247



15. N. Biliskov, A. Borgschulte, K. Užarević, I. Halasz, S. Lukin, S. Milošević, I. Milanović, J. Grbović Novaković **In-situ and Real-time Monitoring of Mechanochemical Preparation of  $\text{Li}_2\text{Mg}(\text{NH}_2\text{BH}_3)_4$  and  $\text{Na}_2\text{Mg}(\text{NH}_2\text{BH}_3)_4$  and their Thermal Dehydrogenation**, The Chemistry-A European Journal 23(64) (2017) 16274–16282.
16. R. Vujasin, J. Grbovic Novakovic N, Novakovic, S. Giusepponi, M/ Celino, **Ab-initio study of hydrogen mobility in the vicinity of  $\text{MgH}_2$ -Mg interface: The role of Ti and  $\text{TiO}_2$** , J. Alloys Compd 696 (2017) 548-559.
17. Ž. Rašković Lovre, S. Kurko, N. Ivanović, J. F. Fernandez, J.- R. Ares, S. Šturm, T. Mongstad, N. Novaković, **J. Grbovic Novakovic, In situ Desorption of Magnesium Hydride Irradiated and Non-irradiated Thin Films: Relation to Optical Properties** J. Alloys Compd 695 (2016) 2381-2388
18. E. Callini, K-F. Aguey-Zinsou, R. Ahuja, J R. Ares, S. Bals, N. Biliskov, S. Chakraborty, G. Charalambopoulou, A-L. Chaudhary, F. Cuevas, B. Dam, P. de Jongh, M. Dornheim, Y. Filinchuk, **J. Grbovic Novakovic**, M. Hirscher, T. R. Jensen, P. Bjerre Jensen, N. Novakovic, Q. Lai, F. Leardini, D. Mirabile Gattia, L. Pasquini, Th. Steriotis, S. Turner, T. Vegge, A. Zuttel, A. Montone, **Nanostructured materials for solid-state hydrogen storage: A review of the achievement of COST Action MP1103** Review Article Int. J. Hydrogen Energy 41(32) (2016) 14404–14428.
19. S. Milošević, S. Kurko, L. Pasquini, Lj. Matović., R. Vujasin, N. Novaković, **J. Grbović Novaković, Fast hydrogen sorption from  $\text{MgH}_2$ - $\text{VO}_2(\text{B})$  composite materials**, Journal of Power Sources 307 (2016) 481- 488
20. R. Vujasin, A. Mraković, S. Kurko, N. Novaković, Lj. Matović, **J. Grbović Novaković**, S. Milošević **Catalytic activity of titania polymorphs towards desorption reaction of  $\text{MgH}_2$** , International Journal of Hydrogen Energy, 41(8)(2016) 4703-4711
21. S. Balos, D. Rajnovic, M. Dramicanin, D. Labus, O. Eric-Cekic, **J. Grbovic Novakovic**, L. Sidjanin. **Abrasive wear behaviour of ADI material with various retained austenite content**, International Journal of Cast Metals Research, 29(4) (2016) 187-193
22. D. Milcius, **J. Grbović Novaković**, R. Zostautienė, M. Lelis, D. Girdzevicius, M. Urbonavicius **Combined XRD and XPS analysis of ex-situ and in-situ plasma hydrogenated magnetron sputtered Mg films** Journal of Alloys and Compounds. 2015. 47 (2015)790-796
23. D. Rajnovic, S. Balos, L. Sidjanin, O. Eric Cekic, **J. Grbovic Novakovic Tensile properties of ADI material in water and gaseous environments** Materials Characterization 101(2015)26-33
24. B. Paskas Mamula, **J. Grbovic Novakovic**, I. Radisavljevic, N. Ivanovic, N. Novakovic **Electronic Structure and Charge Distribution Topology of  $\text{MgH}_2$  doped with 3d Transition Metals** International Journal of Hydrogen Energy, DOI: 39(11) (2014)5874-5887
25. S. Kurko, I. Milanovic, **J. Grbovic Novakovic**, N. Ivanovic, N. Novakovic **Investigation of surface and near-surface effects on hydrogen desorption kinetics of  $\text{MgH}_2$** , International Journal of Hydrogen Energy 39(2) (2014), 862-867

26. **J. Grbović Novaković, Preface of the 1st European Early Stage Researchers' Conferences on Hydrogen Storage** International Journal of Hydrogen Energy, 38 (27) (2013) 12102
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