

# Curriculum Vitae



## Personal information

First name(s) / SURNAME(S)

Current position

Affiliation

Department

Address(es)

Telephone(s)

E-mail

Date of birth

Gender

**Katarina BATALOVIĆ**

**Assistent research professor**

Vinča Institute of Nuclear Sciences, University of Belgrade, Serbia

Laboratory for nuclear and plasma physics

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[kciric@vin.bg.ac.rs](mailto:kciric@vin.bg.ac.rs)

18.12.1984

Female

## Education

Dates

Title of qualification awarded

Principal subjects/occupational skills covered

Name and type of organisation providing education and training

2009-2013

PhD physical chemistry

4th group metals with Ni and Fe – from the electronic structure to hydrogen storage applications

Faculty of physical chemistry, University of Belgrade

Dates

Title of qualification awarded

Principal subjects/occupational skills covered

Name and type of organisation providing education and training

2003-2008

Dipl. Physical chemist

Theoretical investigation of vibronic structure (Renner-Teller's effect) of  $1^2\Delta$  state of C<sub>2</sub>P free radical

Faculty of physical chemistry, University of Belgrade

## Research interests

- ◆ Quantum methods for solid state
- ◆ DFT in materials science
- ◆ Hydrogen energy, hydrogen storage
- ◆ Catalysts for conversion of solar energy
- ◆ Nanomaterials and surface processes

## Citations/h-index

150 / h=9

## Participation in the national projects

Project title /Dates

Occupation or position held

Project title /Dates

Occupation or position held

“Investigation of intermetallics and semiconductors for renewable energy applications” /2011-present

Researcher

“Nanostructural multifunctional materials and nanocomposites” / 2011-present

Researcher

## Participation in the international projects

Project title /Dates Occupation or position held	Metal hydrides-energetic materials/ 2016-2017 Researcher
Project title /Dates Occupation or position held	Modern Tools for Spectroscopy on Advanced Materials: a European Modelling Platform“, MP1306 COST action / 2015-2018 Early stage researcher
Project title /Dates Occupation or position held	Experimental and theoretical investigation of hydrogen sorption in Mg-Zr-Fe-Ni and Ti-Fe-Ni systems /2012-2013 Researcher
<b>Project leadership</b> Project title /Dates	Advanced materials research toward efficient 2-in-1 system for hydrogen production and storage /2016-2017
<b>Reviewer of a journal</b> Title of the journal	<ul style="list-style-type: none"> <li>◆ Physical chemistry chemical physics</li> <li>◆ International Journal of Hydrogen Energy</li> <li>◆ Journal of Physical Chemistry</li> <li>◆ Journal of Alloys and Compounds</li> <li>◆ Computational Materials Science</li> </ul>
<b>Mentorship engagement</b> PhD student Title of the doctoral thesis Status of the dissertation	Milijana Savić Influence of doping on electronic structure and stability of AlH <sub>3</sub> and LiAlH <sub>4</sub> Writing in progress
<b>Membership in scientific Committees &amp; Boards</b>	<ul style="list-style-type: none"> <li>- Member of organisational board of conferences: <ul style="list-style-type: none"> <li>„2<sup>nd</sup> International Meeting on Materials Science for Energy Related Applications“, 29.-30.09. 2016, Belgrade, Serbia</li> <li>„3rd INTERNATIONAL MEETING on Materials Science for Energy Related Applications“, 25-26.09.2018. Belgrade, Serbia</li> <li>„Third International Symposium on materials for energy storage and conversion“, September 10-12.2018. Belgrade, Serbia</li> </ul> </li> <li>- Member of programme board of conferences: <ul style="list-style-type: none"> <li>„Workshop of French, Croatian and Serbian Researchers on Hydrogen Storage and Energy Related Materials“, 18-19.10.2016., Vinca Institute, Belgrade, Serbia</li> <li>“The 2<sup>nd</sup> Workshop of French, Croatian and Serbian Researchers on Hydrogen Storage and Energy Related Materials“, 03-04.10.2017., Vinca Institute, Belgrade, Serbia</li> </ul> </li> </ul>
<b>Memberships in scientific and technical societies</b>	<ul style="list-style-type: none"> <li>◆ Physical society of Serbia</li> <li>◆ Serbian vacuum society</li> </ul>
<b>Prizes and awards</b>	<ul style="list-style-type: none"> <li>◆ “Pavle Savić” diploma by Society of Physical Chemists of Serbia</li> <li>◆ Serbian Chemical Society award for 2009</li> <li>◆ University of Belgrade award “Student of the generation 2007/2008” at the Faculty of Physical Chemistry</li> <li>◆ Eurobank EFG scholarship for 2008</li> <li>◆ 2000-2009 Republic Foundation for the Development of Scientific and Artistic Youth Fellowship</li> </ul>
<b>Selected Papers in last 5 years</b>	1. <b>K. Batalović</b> , N. Bundaleski, J. Radaković, N. Abazović, M. Mitrić, R.A. Silva, M. Savić, J. Belošević-Čavor, Z. Rakočević, C.M. Rangel, <b>Modification of N-doped TiO<sub>2</sub> photocatalysts using noble metals (Pt, Pd) – a combined XPS and DFT study</b> , <i>Phys. Chem.Chem.Phys</i>

19 (2017) 7062-7071

2. **K. Batalović**, J. Radaković, V. Koteski, M. Savić, **Density functional theory guide to structure and thermodynamics of metal hydrides – Case study of (Ti, Zr, Hf) Ni intermetallic compounds**, Int. J. Hydrogen Energy 40 (2015), p. 13029
3. D. Conić, A. Gradišek, J. Radaković, M. Iordoc, M. Mirković, M. Čebela, **K. Batalović**, **Influence of Ta and Nb on the hydrogen absorption kinetics in Zr-based alloys**, Int. J. Hydrogen Energy 40 (2015) 5677–5682
4. **K. Batalović**, J. Radaković, J. Belošević-Čavor, V. Koteski, **Transition metal doping of Mg<sub>2</sub>FeH<sub>6</sub> – a DFT insight into synthesis and electronic structure**, Phys. Chem. Chem. Phys. 16 (2014) 12356-12361

### Congresses and conferences attended -last 3 years

1. **K. Batalović**, J. Radaković, N. Bundaleski, I. Pašti, **Experimental and theoretical insights on charge transfer and cluster formation in co-doped N-TiO<sub>2</sub>**, 3rd international meeting on materials science for energy related applications, 25-26.09.2018. Belgrade, Serbia, Book of Abstracts, pp. 10-12.
2. M. Savić, I. Milanović, Z. Jovanović, M. Bošković, J. Radaković, **K. Batalović**, **LiAlH<sub>4</sub> doped with Fe<sub>2</sub>O<sub>3</sub> – the theoretical and experimental study**, The 2nd Workshop of French, Croatian and Serbian Researchers on Hydrogen Storage and Energy Related Materials, VINCA Institute of nuclear sciences, Belgrade, 3-4.10.2017. Belgrade, Serbia, Book of Abstracts, pp. 13
3. **K. Batalović**, J. Radaković, C. Rangel, I. Pašti, **DFT study of TiO<sub>2</sub> codoping for photocatalytical applications**, 3<sup>rd</sup> International Symposium on Materials for Energy Storage and Conversion (mESC-IS) 10-12.09.2018., Belgrade, Serbia, Book of Abstracts, pp. 55
4. J. Radaković, **K. Batalović**, **Solar power to hydrogen energy – fuelling the renewables**, 9-14. July. 2018, EuroScience Open Forum, Sharing Science: Towards New Horizons (ESOF 2018), Toulouse, France