



# Tatjana Novaković

Naučni savetnik

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**Datum i mesto rođenja:** 1962, Radojevo, Srbija

**Akademski stepen:** 2009 doktor fizičkohemijskih nauka, Fakultet za fizičku hemiju, Univerzitet u Beogradu, Beograd, Srbija

**Zvanje:** 2015 Naučni savetnik – Univerzitet u Beogradu, Institut za hemiju, tehnologiju i metalurgiju

**Članstva u društvima:** Društvo fizikohemičara Srbije  
Srpsko hemijsko društvo  
Sekcija za keramiku Srpskog hemijskog društva

**Profesionalno iskustvo:** 1989–danas Institut za hemiju, tehnologiju i metalurgiju- Centar za katalizu i hemijsko inženjerstvo

**Nagrade i priznanja:**

**Oblasti interesovanja** Oksidi metala, kompoziti na bazi metalnih oksida i polimera  
Fizička hemija površina, adsorpcije  
zaštita životne sredine

**Stručne veštine:** Rad na laboratorijskoj opremi (Sorptomat, živin porozimetar) i poznavanje odgovarajućih profesionalnih softverskih paketa

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**Znanje jezika:** engleski

**Najznačajniji projekti:** **Međunarodni:**

**2004.-2006.** Synthesis and catalytic properties of heterogeneous catalysts

**2014. -2016.** Preparation and application of new catalytic materials

**Osnovna istraživanja:**

**2005-2010:** "Sinteza i karakterizacija i testiranje katalitičkih svojstava specijalno dizajniranih materijala", projekat broj ON 142019B, MNTR RS

**2011-2015** Dinamika nelinearnih fizičkohemijskih i biohemijskih sistema sa modeliranjem i predviđanjem njihovog ponašanja pod neravnotežnim uslovima ON MNTR RS

**Primenjena istraživanja:**

**2001-2004.** MNT.2.09.0022.B-„Modifikovanje prirodnih silikatnih materijala i sinteza novih tipova hidrogenacionih katalizatora na silikatnom nosaču“.

**2005-2010** MNT : Projekat Tehnološkog razvoja, TR-6712B pod nazivom „Ispitivanje i razvoj tehnologija proizvodnje novih proizvoda na bazi sekundarnih mineralnih sirovina sa Kolubarskog ugljenog basena“

**2005-2007** Top-Daun projekat broj ТД-7084 Б „Proizvodnja i primena etil alkohola kao energenta“

**Izabrane publikacije:** **Monografije, poglavlja u knjigama:**

1.A. Nastasović, D. Đorđević, D. Jakovljević, T. Novaković, Z. Vuković, S. Jovanović

“Heavy Metal Ions Removal with Macroporous Poly (4-vinylpyridine-ethylene Glycol Dimethacrylate)”

In "Leading Edge Polymer Research", 2006 Nova Science Publisher, Inc., Editor: Robert K. Bregg, Chapter 7, (2006) pp 213-234

ISBN 1-59454-435-2

2. Aleksandra B. Nastasović, Tatjana B. Novaković, Zorica M. Vuković, Bojana M. Ekmešić, Danijela V. Randelović, Danijela D. Maksin, Zoran P. Miladinović

"Polymer Based Monolit Porous Composite"

In "Proceedings of the III Advanced Ceramics and Applications Conference", Publisher Atlantis Press, Editors William E. Lee, Rajner Gadow, Vojislav Mitić, Nina Obradović, (2015) pp 241-257

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#### **Najvažniji publikovani radovi:**

##### **M21 Rad u vrhunskom međunarodnom časopisu**

1.

A. Nastasović, S. Jovanović, D. Đorđević, A. Onjia, D. Jakovljević, T. Novaković "Metal sorption on macroporous poly(GMA-co-EGDMA) modified with ethylene diamine" Reactive and Functional Polymers vol. 58, (2004) 139-147

2.

Lj.S.Rožić, S.P.Petrović, T.B.Novaković, Ž.D.Čupić, Ž.B.Grbavčić, D.M.Jovanović " Textural and fractal properties of CuO/Al<sub>2</sub>O<sub>3</sub> catalyst supports" Chemical Engineering Journal vol 120, (2006) 55-61

3.

Tatjana Novaković, Ljiljana Rožić, Srđan Petrović, Aleksandra Rosić

"Synthesis and characterization of acid activated Serbian smectite clays obtained by statistically designed experiments" Chemical Engineering Journal vol 137, 2, (2008) 436-442

4.

T. Novaković, N. Radić, B. Grbić, V. Dondur, M. Mitrić, D. Randjelović, D. Stoych and P. Stefanov „The thermal stability of porous alumina/stainless steel catalyst support obtained by spray pyrolysis“ Applied Surface Science 255, (2008) 3049-3055

5.

Srđan Petrović, Tatjana Novaković, Ljiljana Rožić "Statistical design of experiments of acid activation of smectite clay from Serbia and its bleaching capacity" Journal of Chemical Technology and Biotechnology 84 (2) (2009) 176-179

6.

Ljiljana Rožić, Tatjana Novaković, Srđan Petrović "Modeling and optimization process parameters of acid activation of bentonite by response surface methodology" Applied Clay Science 48 (2010) 154-158

7.

Ljiljana Rožić, Boško Grbić, Nenad Radić, Srđan Petrović, Tatjana Novaković, Zorica Vuković, Zoran Nedić "Mesoporous 12-tungstophosphoric acid/activated bentonite catalysts for oxidation of 2-propanol " Applied Clay Science 53 (2) (2011) p. 151-156

8.

Nenad Radić, Boško Grbić, Ljiljana Rožić, Tatjana Novaković, Srđan Petrović, Dimitar Stoychev, Plamen Stefanov "Effects of organic additives on alumina coatings on stainless steel obtained by spray pyrolysis" Journal of Non-Crystalline Solids 357 (21) No.1 (2011) p. 3592-3597

9.

Milica Carević, Nadica D. Abazović, Tatjana Savić, Tatjana B. Novaković, Miloš D. Mojović, Mirjana I. Čomor

*"Structural, optical and photodegradation properties of pure and Fe-doped titania nanoparticles probed using simulated Solar light "* Ceramics International 42 (2016) p. 1521-1529

#### **M22 Rad u istaknutom međunarodnom časopisu**

1.

N.N. Jovanović, T. Novaković, J. Janačković and A. Terlecki-Baričević " *Properties of activated alumina obtained by flash calcination of gibbsite*" Journal of Colloid and Interface Science vol 150. No 1, (1992) 36

2.

Tatjana Novaković, Nenad Radić, Boško Grbić, Tsvetana Marinova, Plamen Stefanov, Dimitar Stoychev " *Oxidation of n-hexane over Pt and Cu–Co oxide catalysts supported on a thin-film zirconia/stainless steel carrier*" Catalysis communication 9, (2008) 1111–1118

3.

Srdjan Petrović, Ljiljana Rožić, Zorica Vuković, Tatjana Novaković, Dragomir Stanisavljev " *Response surface optimization for activation of bentonite using microwave irradiation*" Clays and Clay Minerals 60 (2012) p. 32-39

#### **M 23 Rad u međunarodnom časopisu**

1.

N.N. Jovanović, V.R. Nikolić, T. Novaković i A. Terlecki-Baričević " *Effect of the rapid thermal decomposition of gibbsite on the fractal dimension of product surfaces "* Journal of Serbian Chemical Society vol 58. (3-4) (1993) 229

2.

T. Srećković, M.G. Kakazey, T.B. Novaković " *Evolution of the Dispersivity and Structure of Polycrystal Zinc-Oxide During Tribophysical Activation "* Science of Sintering vol.27 (3), (1995) 183

3.

N.N. Jovanović, Z.M. Vuković, T.B. Novaković and A. Radaković " *The effect of thermal treatment on the fractal dimensions of the surface of alumina obtained by the sol-gel method "* Journal of Serbian Chemical Society 61 (1) (1996) 39

4.

N.N. Jovanović, Z.M. Vuković, T.B. Novaković " *The Effects of Additives on the Thermal Stability of Porous Structure of Alumina Obtained by the Sol-Gel Process "* Science of Sintering 28, Spec. Issue, 165 (1996)

5.

Lj. Rožić, T. Novaković, N. Jovanović i A. Terlecki-Baričević and Ž. Grbavčić " *The kinetics of the partial dehydration of gibbsite to activated alumina in a reactor for pneumatic transport*" Journal of Serbian Chemical Society, vol 66 (4) (2001) 273-280

6.

Z. Vuković, A. Milutinović-Nikolić, J. Krstić, A. Abu-Rabi, T. Novaković and D. Jovanović " *The Influence of acid Treatment on the Nanostructure and Textural Properties of Bentonite Clays*" "Materials Science Forum" vol. 494, (2005) 339-344

7.

Ljiljana Rožić<sup>1</sup>, Tatjana Novaković<sup>1</sup>, Srđan Petrović<sup>1</sup>, Željko Čupić<sup>1</sup>, Željko Grbavčić<sup>2</sup> and Aleksandra Rosić<sup>3</sup> „*The sorption and crystallographic characteristics of alumina activated in the reactor for pneumatic transport*" Journal of Serbian Chemical Society, vol 71 (11) (2006) 1237-1246

8.

T. Novaković, N. Radić, B. Grbić, D. Stoychev, P. Stefanov and T. Marinova " *Preparation of ZrO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> Thin-films on Stainless Steel by Spray Pyrolysis*" Materials Science Forum, vol. 555, (2007) 321-326

9.

Ljiljana Rožić, Tatjana Novaković and Srđan Petrović "Process improvement approach to the acid activation of smectite using factorial and orthogonal central composite design methods" Journal of Serbian Chemical Society, vol 73 (4) (2008) 487-497

10.

Ljiljana Rožić, Srđan Petrović, Tatjana Novaković: " $\beta$  – carotene removal from soybean oil with smectite clay using central composite design" *RJ of Physical Chemistry* 83 (9) (2009) 1-4

11.

Tatjana B. Novaković, Ljiljana S. Rožić, Srđan P. Petrović, Zorica M. Vuković and Vera T. Dondur "Pore surface fractal analysis of peg and  $La^{3+}$  doped mesoporous alumina obtained by sol-gel method" Journal of Serbian Chemical Society, vol 75 ( 6) (2010) 833-843

12.

Srđan P. Petrović , Zorica M. Vuković, Tatjana B. Novaković, Zoran P. Nedić, Ljiljana S. Rožić "Fractal analysis of bentonite modified with heteropoly acid by using nitrogen sorption and mercury intrusion porosimetry" Journal of the Serbian Chemical Society 76 (10), (2011) 1403-1410

13.

Tatjana B. Novaković, Ljiljana S. Rožić, Zorica M. Vuković, Srđan P. Petrović

" UTICAJ DODATKA POLIETILEN GLIKOLA I LANTANA NA MEHANIZAM SINTEROVANJA ALUMINIJUM-OKSIDA DOBIJENOG SOL-GEL POSTUPKOM", HEMIJSKA INDUSTRIJA VOL 65 (4) (2011) 355-363

14. Ljiljana S. Rožić, Srđan P. Petrović, Zorica M. Vuković, Tatjana B. Novaković, Dragomir R. Stanisavljev

"OPTIMALNO FAKTORNO PLANIRANJE PROCESA KISELINSKE AKTIVACIJE BENTONITA U MIKROTALASNOM POLJU" HEMIJSKA INDUSTRIJA 65 (5) (2011) 485 - 495

15.

Mojović Zorica, Rožić Ljiljana, Novaković Tatjana, Vuković Zorica, Petrović Srđan, Ranđelović Danijela, Mitrić Miodrag "Electrochemical behavior of  $H_3PW_{12}O_{40}$ /acid-activated bentonite powders" Chemical Industry and Chemical Engineering Quarterly, 18 (2) (2012) 329-338

16.

Tatjana D. Savić, Ivana Lj. Validžić, Tatjana B. Novaković, Zorica M. Vuković, Mirjana I. Čomor "A synergy of ZnO and  $ZnWO_4$  in Composite Nanostructures Deduced from Optical Properties and Photocatalysis" Journal of Cluster Science, 23 (4) (2013) 679-688

17.

Tatjana B. Novaković, Ljiljana S. Rožić, Srđan P. Petrović, Zorica M. Vuković, Miodrag M. Mitrić "Study of the effect of Mg (II) addition and annealing conditions on the structure of mesoporous aluminum oxide using Plackett-Burman design" Journal of the Serbian Chemical Society 80 (12) (2015) p.1529-1540

18.

Tatjana B. Novaković, Ljiljana S. Rožić, Srđan P. Petrović, Dragomir Stanisavljev "Desorption of  $\beta$ -carotene from bentonite adsorbent under microwave irradiation" Macedonian Journal of Chemistry and Chemical Engineering Vol. 34, No. 2, (2015)

#### **Saopštenja:**

Veliki broj saopštenja