

Na osnovu čl. 30. stav 3. Zakona o visokom obrazovanju, čl. 40. Statuta TMF i čl. 39. Pravilnika o doktorskim studijama TMF, na sednici Nastavno-naučnog veća Tehnološko-metalurškog fakulteta od 07.05.2015. godine, doneta je

O D L U K A

o prihvatanju Referata o oceni doktorske disertacije

Prihvata se Referat Komisije u sastavu: dr Nikola Nikačević, vanredni profesor Univerziteta u Beogradu, Tehnološko-metalurški fakultet, dr Dragomir Bukur, redovni profesor Texas A&M Univerzitet SAD, dr Aleksandar Orlović, redovni profesor Univerziteta u Beogradu, Tehnološko-metalurški fakultet, o pregledu i oceni urađene doktorske disertacije pod nazivom: „MODELOVANJE HEMIJSKE KINETIKE I OPTIMIZACIJA REAKTORA SA PAKOVANIM SLOJEM ZA *Fischer-Tropsch* SINTEZU“ koju je podneo **BRANISLAV TODIĆ**, dipl. inž., i upućuje se na saglasnost Veću naučnih oblasti tehničkih nauka Univerziteta u Beogradu.

Veće naučnih oblasti tehničkih nauka Univerziteta u Beogradu dalo je saglasnost na predlog teme doktorske disertacije Branislava Todića pod nazivom „MODELOVANJE HEMIJSKE KINETIKE I OPTIMIZACIJA REAKTORA SA PAKOVANIM SLOJEM ZA *Fischer-Tropsch* SINTEZU“ Odlukom 02 broj: 61206-4604/2-14 od 20.10.2014. godine.

Verifikacija naučnih doprinosa:

Kategorija M21:

1. **Branislav Todic**, Vitaly V. Ordonsky, Nikola M. Nikacevic, Andrei Y. Khodakov, Dragomir B. Bukur, “Opportunities for intensification of Fischer–Tropsch synthesis through reduced formation of methane over cobalt catalysts in microreactors”, *Catalysis Science & Technology*, **2015**, 5, 1400-1411, (IF = **4.760**) (ISSN: 2044-4753)
2. **Branislav Todic**, Wenping Ma, Gary Jacobs, Burtron H. Davis, Dragomir B. Bukur, “Effect of process conditions on the product distribution of Fischer–Tropsch synthesis over a Re-promoted cobalt-alumina catalyst using a stirred tank slurry reactor”, *Journal of Catalysis*, **2014**, 311, 325-338. (IF = **6.073**) (ISSN: 0021-9517)
3. **Branislav Todic**, Wenping Ma, Gary Jacobs, Burtron H. Davis, Dragomir B. Bukur, “CO-insertion mechanism based kinetic model of the Fischer–Tropsch synthesis reaction over Re-promoted Co catalyst”, *Catalysis Today*, **2014**, 228, 32-39. (IF = **2.980**) (ISSN: 0920-5861)
4. **Branislav Todic**, Tejas Bhatelia, Wenping Ma, Gary Jacobs, Burtron H. Davis, Dragomir B. Bukur, “Kinetic Model of Fischer–Tropsch Synthesis in a Slurry Reactor on Co–Re/Al₂O₃ Catalyst”, *Industrial and Engineering Chemistry Research*, **2013**, 52, 669-679. (IF = **2.206**) (ISSN: 0888-5885)

Naučni radovi objavljeni u vrhunskim međunarodnim časopisima (M21) koji nisu deo disertacije:

1. Tomasz Olewski, **Branislav Todic**, Lech Nowicki, Nikola Nikacevic and Dragomir B. Bukur, "Hydrocarbon selectivity models for iron-based Fischer–Tropsch catalyst", *Chemical Engineering Research and Design*, **2015**, 95, 1. (IF = **2.281**) (ISSN: 0263-8762)
2. Gary Jacobs, Wenping Ma, Pei Gao, **Branislav Todic**, Tejas Bhatelia, Dragomir B. Bukur, Syed Khalid, Burtron H. Davis, "The application of synchrotron methods in characterizing iron and cobalt Fischer–Tropsch synthesis catalysts", *Catalysis Today*, **2013**, 214, 100. (IF = **2.980**) (ISSN: 0920-5861)
3. Gary Jacobs, Wenping Ma, Pei Gao, **Branislav Todic**, Tejas Bhatelia, Dragomir B. Bukur, Syed Khalid, Burtron H. Davis, "Fischer-Tropsch synthesis: differences observed in local atomic structure and selectivity with Pd compared to typical promoters (Pt, Re, Ru) of Co/Al₂O₃ catalysts", *Topics in Catalysis*, **2012**, 55, 811. (IF = **2.608**) (ISSN: 1022-5528)

Kategorija M51:

1. **Branislav Todic**, Tomasz Olewski, Nikola Nikacevic, Dragomir B. Bukur, "Modeling of Fischer-Tropsch product distribution over Fe-based catalyst", *Chemical Engineering Transactions*, **2013**, 32, 793-798. (IF = N/A) (ISSN: 19749791)

Kategorija M34:

1. **Branislav Todic**, Wenping Ma, Gary Jacobs, Burtron H. Davis, Dragomir B. Bukur, "Importance of methane formation in determining overall selectivity of Fischer-Tropsch synthesis over cobalt-based catalyst", 249th American Chemical Society National Meeting, March 22-26, 2015, Denver, US.
2. **Branislav Todic**, Tomasz Olewski, Nikola Nikacevic, Dragomir B. Bukur, "Modeling of Fischer-Tropsch product distribution over Fe-based catalyst", 11th International Conference on Chemical & Process Engineering, June 2-5, 2013, Milan, Italy
3. Wenping Ma, Gary Jacobs, **Branislav Todic**, Dragomir B. Bukur and Burtron H. Davis, "Fischer-Tropsch synthesis: Influence of process conditions on deactivation of Ru and Re promoted 25%Co/Al₂O₃ catalysts", 23rd North American Catalysis Society Meeting, June 2-7, 2013, Louisville, US.
4. **Branislav Todic**, Nikola Nikacevic, Dragomir B. Bukur, "Application of detailed kinetics in a fixed bed reactor model for the Fischer-Tropsch synthesis", 9th European Congress of Chemical Engineering, April 21–25, 2013, The Hague, Nederland.
5. **Branislav Todic**, Wenping Ma, Gary Jacobs, Burtron H. Davis and Dragomir B. Bukur, "Detailed kinetic model of Fischer-Tropsch synthesis over a cobalt-based catalyst", 9th European Congress of Chemical Engineering, April 21–25, 2013, The Hague, Nederland.
6. Gary Jacobs, Wenping Ma, **Branislav Todic**, Dragomir B. Bukur and Burtron H. Davis, "Fischer-Tropsch synthesis: linking cobalt catalyst promoter performance parameters to catalyst structure: an EXAFS investigation", NGCS 10, March 2–7, 2013, Doha, Qatar.
7. **Branislav Todic**, Wenping Ma, Gary Jacobs, Burtron H. Davis and Dragomir B. Bukur, "CO-insertion mechanism based comprehensive kinetic model of Fischer-Tropsch Synthesis over Re-promoted Co catalyst", NGCS 10, March 2–7, 2013, Doha, Qatar.
8. Wenping Ma, Gary Jacobs, **Branislav Todic**, Dragomir B. Bukur and Burtron H. Davis, "Fischer-Tropsch synthesis: Activity and selectivity of 0.48% Re-25%Co/Al₂O₃ catalyst in a

1L slurry-phase reactor”, AIChE Annual Meeting, October 28 – November 2, 2012., Pittsburgh, US.

9. **Branislav Todic**, Tejas Bhatelia, Wenping Ma, Gary Jacobs, Burtron H. Davis and Dragomir B. Bukur, “Comprehensive kinetic model of Fischer-Tropsch synthesis in a slurry reactor”, SynFuel2012 Symposium, June 29-30, 2012, Munich, Germany.
10. **Branislav Todic**, Tejas Bhatelia, Wenping Ma, Gary Jacobs, Burtron H. Davis and Dragomir B. Bukur, “Kinetic modeling of GTL product distribution on Co catalyst”, Research Poster, Research-Industry Partnership Showcase, May 21, 2012, Doha, Qatar.
11. Jacobs, G., Ma, W., Davis, B.H., **Todic, B.**, Bhatelia, T., Bukur, D.B, “The application of synchrotron methods in characterizing iron and cobalt Fischer-Tropsch synthesis catalysts,” Keynote Lecture, Syngas Convention 2012, April 1-4, 2012, Cape Town, South Africa.
12. **Branislav Todic**, Tejas Bhatelia, Wenping Ma, Gary Jacobs, Burtron H. Davis and Dragomir B. Bukur, “Comprehensive kinetic model for Fischer-Tropsch synthesis over a Re promoted Co/Al₂O₃ catalyst”, AIChE Spring National Meeting, April 1-5, 2012., Houston, US.
13. Tejas Bhatelia, **Branislav Todic**, Dragomir Bukur, Wenping Ma, Burtron Davis and Gary Jacobs, “Detailed kinetics of the Fischer-Tropsch reaction over a Ru-promoted Co/Al₂O₃ catalyst”, Qatar Foundation Annual Research Forum, November 20-22, 2011, Doha, Qatar.

Doktorska disertacija i Referat o oceni doktorske disertacije dostavljaju se na uvid javnosti, a po isteku roka od 30 dana, na saglasnost Veću naučnih oblasti tehničkih nauka Univerziteta u Beogradu.

Odluku dostaviti: Veću naučnih oblasti tehničkih nauka Univerziteta, doktorandu, mentoru, Službi za nastavno-studentske poslove, Biblioteci i Arhivi fakulteta.

D E K A N

Prof. dr Đorđe Janačković