

Петър Димитров Георгиев е завършил образователно-квалификационна степен „бакалавър“ – специалност Химия и физика и магистърска програма „Наноматериали и нанотехнологии“ във Факултет химия и фармация на Софийския университет „Св. Климент Охридски“.

През 2014 г. защитава докторска дисертация на тема: „Кинетика и синтез на златни наночастици в присъствие на метални йони с нов подход за охарактеризиране и приложения във фотокатализата“.

Основна област на научни изследвания: Нанотехнологии, Атомно-силова микроскопия, Биополимери.

#### Научни публикации:

1. P. Georgiev, M. Kostadinov, A. Bojinova, C. Papazova, C. Dushkin, I. Poulivos S. Sotiropoulos, “Synthesis, Doping and Characterization of TiO<sub>2</sub> for Photocatalysis” - In: *Ann. De L’Univ. De Sofia, Fac. De Chimie*, t. **96** (2003).
2. M. Kostadinov, P. Georgiev, A. Bojinova, C. Dushkin. “Preliminary Tests for the Photocatalytic Activity of TiO<sub>2</sub> Nanoparticles in Slurry” – In: *Proc. of 4<sup>rd</sup> National Workshop with International Participation “Nanoscience and Nanotechnology 2003”*, **4**, Heron Press, Bulgarian Academy of Sciences, Sofia, Bulgaria.
3. P. Georgiev, I. Angelov, C. Papazova, A. Bojinova, “Aggregation of Sol-Gel Obtained TiO<sub>2</sub> Nanopowders” – In: *Natural Sciences* (2003), Bulgaria.
4. C. Dushkin, P. Georgiev, K. Rajabloo, P. Vasileva, N. Vaklev, Metal nanoparticles, *Nanoscience and nanotechnology* **10**, Heron Press Sci. Series, E. Balabanova, I. Dragieva (eds.) (2011).
5. S. Angelova, P. Georgiev, G. Gicheva, C. Dushkin, T. Dikova, Comparison of the optical properties of nanoparticles, syntesized by different chemical methods, *Nanoscience and nanotechnology* **10**, Heron Press Sci. Series, E. Balabanova, I. Dragieva (eds.) (2011).
6. P. Georgiev, K. Rajabloo, P. Vasileva, C. Dushkin, Foams with metal nanoparticles, *Nanoscience and nanotechnology* **10**, Heron Press Sci. Series, E. Balabanova, I. Dragieva (eds.) (2011).
7. S. Karakashev, P. Georgiev, K. Balashev, Foam production – ratio between foaminess and rate of foam decay, *Journal of Colloid and Interface Science*, 379(1):144-7.

8. P. Georgiev, S. Angelova, A. Bojinova, C. Dushkin and K. Balashev, Acceleration of gold nanoparticle growth by europium (III) ions, *Nanoscience and nanotechnology* (2013).
9. A. Bojinova, C. Dushkin, M. Kostadinov, N. Kaneva, G. Ivanova, P. Georgiev, Sol gel obtained nanocomposite TiO<sub>2</sub>/WO<sub>3</sub> thin films for photocatalytic applications, *Nanoscience and Nanotechnology*, (2013).
10. S. Karakashev, P. Georgiev, K. Balashev, On the growth of pneumatic foams. *Eur. Phys. J. E. Soft Matter*. (2013) 36(2):13.
11. P. Georgiev, K. Balashev, Implementing the atomic force microscopy for studing the kinetics of gold nanoparticle growth, *Nanoscience and Nanotechnology* submitted
12. P. Georgiev, A. Bojinova, B. Kostova, D. Momekova, T. Bjornholm, K. Balashev, Implementing the atomic force microscopy for studying the kinetics of gold nanoparticle's growth, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **434**, (2013), 154-163
13. P. Georgiev, N. Kaneva, A. Bojinova, K. Papazova, K. Mircheva, K. Balashev, Effect of gold nanoparticles on the photocatalytic efficiency of ZnO films, *Colloids and Surfaces A: Physicochemical and Engineering Aspects* (2014),  
<http://dx.doi.org/10.1016/j.colsurfa.2014.02.004>

#### Участия в конференции:

1. P. Georgiev, M. Kostadinov, A. Bojinova, C. Papazova, C. Dushkin, S. Sotiropoulos, "Synthesis, Doping and Characterization of TiO<sub>2</sub> for Photocatalytic Applications" – In: *3<sup>rd</sup> Seminar of New Materials for the Industry (SNMI'2002)*, May 30, 2002, University of Sofia, Sofia, Bulgaria, P-24, p. 26.
2. M. Kostadinov, P. Georgiev, A. Bojinova, C. Dushkin. "Test for the Photocatalytic Activity of TiO<sub>2</sub> Nanoparticles" – In: *4<sup>th</sup> National Workshop with International Participation "Nanoscience and Nanotechnology"* 17-19 October 2002, Bulgarian Academy of Sciences, Sofia, Bulgaria, P4.19.
3. A. Bojinova, P. Georgiev, I. Angelov, M. Uzunova, M. Kostadinov, C. Duskin, S. Sotiropoulos. "Synthesis, Doping and Characterization of TiO<sub>2</sub> in High Internal Phase

- Polymer Matrix” In: *7<sup>th</sup> Intern. Conference on TiO<sub>2</sub> Photocatalysis: Fundamental and Applications*, 17-21 November 2002, Toronto, Ontario, Canada, p. 117.
4. P. Georgiev, S. Pisov, E. Slavcheva, I. Dragieva and A. Proykova, Modeling of coreTiO<sub>2</sub>/shell metal cathalyst, *5<sup>th</sup> Workshop on Nanoscience and Nanotehnology*, Sofia 17-18.11.2003.
  5. P. Georgiev, Kinetics of growth of gold nanoparticles, *7<sup>th</sup> National Conference of Chemistry for students*, Faculty of Chemistry, University of Sofia, Sofia, Bulgaria, 2008, oral presentation.
  6. P. Georgiev, C. Dushkin, P. Vasileva, P. Oshel, Growth kinetics of gold nanoparticles synthesized by citrate method, *6<sup>th</sup> National Conference of Chemistry*, University of Chemical Technology and Metallurgy, Sofia, Bulgaria 2008 poster presentation.
  7. P. Georgiev, D. Aisa, P. Vasileva, C. Dushkin, Effect of copper (II) ions on the growth kinetics of gold nanoparticles, *12<sup>th</sup> International Conference Mechanics and Technology of Composite Materials*, Bulgarian Academy of Science, Varna, Bulgaria, 2009 poster presentation.
  8. P. Georgiev, C. Dushkin, P. Vasileva, N. Vaklev, The kinetics of growth of metal nanoparticles, *COST D43 Symposium Borovetz*, Bulgaria, 2010 oral presentation.
  9. P. Georgiev, K. Rajabloo, P. Vasileva, C. Dushkin, Foams with metal nanoparticles, *12<sup>th</sup> International Workshop Nanoscience and Nanotechnology*, Bulgarian Academy of Science, Varna, Bulgaria 2010 poster presentation.
  10. C. Dushkin, P. Georgiev, P. Vasileva, N. Vaklev, Metal nanoparticles, *12<sup>th</sup> International Workshop Nanoscience and Nanotechnology*, Bulgarian Academy of Science, Varna, Bulgaria 2010 oral presentation.
  11. P. Georgiev, D. Aisa, A. Bojinova, C. Dushkin, K. Balashev, D. Dimitrov, Effect of copper ions on the kinetics of gold nanoparticle growth, *13 National Conference in Catalysis*, Bulgarian Academy of Science Sofia Bulgaria 2011 oral presentation.
  12. P. Georgiev, D. Aisa, P. Vasileva, C. Dushkin, K. Balashev, Effect of copper (II) ions on the growth kinetics of gold nanoparticles, *3<sup>th</sup> Scientific Conference*, Faculty of Chemistry, University of Sofia, Bulgaria, 2011 poster presentation.
  13. P. Georgiev, S. Angelova, A. Bojinova, K. Balashev, C. Dushkin, Acceleration of gold nanoparticle growth by europium (III) ions, *13<sup>th</sup> International Workshop Nanoscience*

*and Nanotechnology*, Bulgarian Academy of Science, Sofia, Bulgaria 2011 poster presentation.

14. A. Bojinova, C. Dushkin, M. Kostadinov, N. Kaneva, P. Georgiev, A. Loukanov, Sol gel obtained nanocomposite  $\text{TiO}_2/\text{WO}_3$  thin films for photocatalytic applications, *13th International Workshop Nanoscience and Nanotechnology*, Bulgarian Academy of Science, Sofia, Bulgaria 2011 poster presentation.
15. P. Georgiev, D. Aisa, C. Dushkin, K. Balashev, Acceleration effect of copper ions to citrate synthesis of gold nanoparticles and AFM approach to accelerated growth process, *International Conference Advanced Functional Materials*, Riviera resort, Bulgaria 2012 poster presentation.
16. P. Georgiev, C. Dushkin, K. Balashev, Acceleration of gold nanoparticle synthesis by europium, copper and silver ions, *14 National Conference in Catalysis*, Bulgarian Academy of Science Sofia Bulgaria 2012 oral presentation.
17. P. Georgiev, Implementing the atomic force microscopy for studying the kinetics of gold nanoparticle growth, *14th International Workshop Nanoscience and Nanotechnology*, Technical University, Sofia Bulgaria 2012 oral presentation.
18. P. Georgiev, K. Balashev, Catalysis of Gold Nanoparticle Synthesis by Europium, Copper and Silver ions, Workshop „Materials for Clean Energy and Optics“ Pravets, Bulgaria 2013 oral presentation.
19. P. Georgiev, S. Simeonova, K. Balashev, New Green Synthesis of Gold Nanoparticles with Chitosan and Citric Acid, Workshop „Materials for Green Chemistry and Environmental Protection“, Riviera resort, Bulgaria 2013 oral presentation.

*Travelling abroad:*

Aristotle University of Thessaloniki, Chemistry Department, Physical Chemistry Laboratory, Greece, funded by NATO Science for Peace SfP977986 (2002).

COST Action: D43 Training School title: Surfaces: Interaction Forces and Engineering  
Reference : ECOST-TRAINING\_SCHOOL-D43-130410-000866 Training School dates: from  
13-04-2010 to 16-04-2010 Location: Delft University of Technology (TUD), Dept. Chemical  
Engineering, Julianalaan 136, Delft 2628 BL, Netherlands.

