

## ЛИЧНА ИНФОРМАЦИЯ



## Евгени Христов Иванов

📍 Даскал Никита 2Б, 1574 София (България)  
☎ (+359) 2 979 64 81 📠 (+359) 899 48 56 77  
✉ ivanov\_evgeni@yahoo.com  
🌐 [http://www.imbm.bas.bg/index.php/bg\\_BG/olem](http://www.imbm.bas.bg/index.php/bg_BG/olem)

Пол Мъж | Дата на раждане 27/02/1972, София | Националност българин

## ТРУДОВ СТАЖ

- Заместник директор**  
13.12.2018 – 30.06.2023 на Институт по механика, Българска академия на науките, „Акад. Г. Бончев”, Бл. 4, София (България)
- Професор**  
31.10.2018 - До сега Институт по механика, Българска академия на науките, „Акад. Г. Бончев”, Бл. 4, София (България)
- Доцент**  
08/12/2011 – 24.10.2018 Институт по механика, Българска академия на науките, „Акад. Г. Бончев”, Бл. 4, София (България)
- Управител**  
04/07/2013 - До сега Изследване и разработване на наноматериали и нанотехнологии - НаноТехЛаб ООД, „Акад. Г. Бончев”, Бл. 4, София (България)
- Главен асистент**  
02/09/2008 – 08/12/2011 Институт по механика, Българска академия на науките, „Акад. Г. Бончев”, Бл. 4, София (България)
- Асистент**  
03/04/2007 – 02/09/2008 Централна лаборатория по физико-химична механика, Българска академия на науките, „Акад. Г. Бончев”, Бл. 1, София (България)
- Инженер-химик**  
01/02/2007 – 03/04/2007 Централна лаборатория по физико-химична механика, Българска академия на науките, „Акад. Г. Бончев”, Бл. 1, София (България)

## ОБРАЗОВАНИЕ И ОБУЧЕНИЕ

1998: Защитена дипломна работа за придобиване на образователна степен „Магистър” по специалност „Инженерна химия” на тема „Енергийно интегриране на колони в технологична схема за сушене и регенерация на фенол”  
Факултет по органични технологии и инженерна химия, Химикотехнологичен и металургичен университет, София (България)

2007: Защитена дисертация за придобиване на образователна и научна степен "Доктор" на тема „Реологично поведение и свойства на композити от термореактивни полимери с наноразмерни въглеродни пълнители”

Централна лаборатория по физико-химична механика, Българска академия на науките, София (България)

#### Специализации в чужбина:

**2007: Italy** (Istituto per i Polimeri, Compositi e Biomateriali (IPCB) - Consiglio Nazionale delle Ricerche (CNR)) - 2 weeks;

**2008: Italy** (Istituto per i Polimeri, Compositi e Biomateriali (IPCB) - Consiglio Nazionale delle Ricerche (CNR)) - 2 weeks;

**2010: Germany** (Max-Planck-Institut für Eisenforschung GmbH) - 2 weeks; **UK** (Centre for Advanced Microscopy at the University of Reading) - 2 weeks; **USA** (Centre for Tribology, California) - 1 month; **Italy** (Istituto per i Polimeri, Compositi e Biomateriali (IPCB) - Consiglio Nazionale delle Ricerche (CNR)) - 2 weeks;

**2011: UK** (Centre for Advanced Microscopy at the University of Reading) - 2 weeks; **Italy** (Istituto per i Polimeri, Compositi e Biomateriali (IPCB) - Consiglio Nazionale delle Ricerche (CNR)) - 2 weeks;

**2012: France** (Ales School of Mines) - 1.5 months;

**2013: Italy** (Istituto per i Polimeri, Compositi e Biomateriali (IPCB) - Consiglio Nazionale delle Ricerche (CNR)) - 1.5 months; **UK** (Centre for Advanced Microscopy at the University of Reading) - 2 weeks;

**2017: Italy** (University of Salerno) - 1 month; **Italy** (Istituto per i Polimeri, Compositi e Biomateriali (IPCB) - Consiglio Nazionale delle Ricerche (CNR)) - 1 month; **Italy** (Istituto per i Polimeri, Compositi e Biomateriali (IPCB) - Consiglio Nazionale delle Ricerche (CNR)) - 1 month; **China** (Polymer Research Institute, Sichuan University) - 1 month; **Brazil** (MackGraphe, MACKENZIE Presbyterian University, Sao Paulo) – 1 month;

**2018: Brazil** (MackGraphe, MACKENZIE Presbyterian University, Sao Paulo) - 2 months; **China** (Polymer Research Institute, Sichuan University) - 2 months;

**2019: Belgium** (University of Namur) – 2 weeks; **Belarus** (Institute for Nuclear Problems, Belarusian State University, Minsk) – 1 month; **Italy** (Consiglio Nazionale delle Ricerche, Istituto per i Polimeri, Compositi e Biomateriali - Napoli/Portici) – 1 week;

**2021: Georgia** (Ilia Vekua Sukhumi Institute of Physics and Technology (SIPT)) – 1 Month; **Belgium** (University of Namur) – 2 weeks;

**2022: UK** (University of Wolverhampton) – 1 Month;

**2023: UK** (Liverpool John Moores University) – 1 Month;

Над 50 участия с доклади и постери в международни конференции, семинари и срещи.

#### ЛИЧНИ УМЕНИЯ И КОМПЕТЕНЦИИ

Майчин език български

#### Други езици

	РАЗБИРАНЕ		ГОВОРЕНЕ		ПИСАНЕ
	Слушане	Четене	Участие в разговор	Самостоятелно устно изложение	
английски	C1	C2	C1	C1	C2
руски	C1	B2	B2	B2	B1

неМСКИ	A1	A2	A1	A1	A1
<p>Ниво: A1/A2: Основно ниво на владеене - B1/B2: Самостоятелно ниво на владеене - C1/C2 Свободно ниво на владеене</p> <p><u>Обща европейска езикова рамка</u></p>					
Комуникационни умения и компетенции	Опит при работа с многонационален колектив. Участие с постери и презентации на международни конференции в страната и чужбина.				
Организационни умения и компетенции	Опит при работа по проекти с многонационален колектив. Ръководител на докторанти.				
Професионални умения и компетенции	<p>Полимерни нанокompозити; реологични, структурни, термични, физични и механични свойства; връзка "реология-структура-свойства". Мултифункционални полимерни нанокompозити с графен и въглеродни нанотръбички: реологични, микро и наномеханични изследвания на усилващите ефекти от наноразмерните пълнители. Реологични изследвания на течни системи с реометър. Реология на нанодисперсии, нисковискозни течности, полимери и полимерни стопилки, масла, хранителни продукти, материали за козметиката и фармацевцията, биоматериали. Наноиндентация и сканиране с атомно силов микроскоп. Микроиндентация и надраскване. Триене и износване. Макромеханични изпитвания: опън, огъване, усукване и натиск. Динамичен механичен термичен анализ при усукване. Термичен гравиметричен анализ. Диференциална сканираща калориметрия. Електро- и топлопроводимост на полимерни нанокompозити. Сканираща електронна микроскопия. Изпитвания на малки образци, влакна, филми и покрития от полимери, керамика, метали; образци и материали за приложение в микроелектрониката, широк спектър от инженерни приложения, козметика и фармацевция, дентални и био-медицински материали и др. Електроовлажняване, разработване на филament за 3Д принтиране и 3D принтиране.</p>				
Компютърни умения и компетенции	Microsoft Office; Origin; Photoshop; Video Software; ImageJ; <u>MacintoshOS</u> ; Работа със специализиран софтуер.				

ДОПЪЛНИТЕЛНА  
ИНФОРМАЦИЯ

Публикации

<https://www.scopus.com/authid/detail.uri?authorid=55912544200>

[https://scholar.google.bg/citations?user=VvIq\\_rQAAAAJ&hl=en](https://scholar.google.bg/citations?user=VvIq_rQAAAAJ&hl=en)

[https://www.researchgate.net/profile/E\\_Ivanov](https://www.researchgate.net/profile/E_Ivanov)

**Глави от книги:**

1. **Evgeni Ivanov**, Rumiana Kotsilkova. Chapter 17: Reinforcement Effects of Carbon Nanotubes in Polypropylene: Rheology, Structure, Thermal Stability, and Nano-, Micro-, and Macromechanical Properties. Handbook of Nanoceramic and Nanocomposite Coatings and Materials. (Eds. A. S. H. Makhlof, D. Scharnweber) Elsevier, 2015, 357-388 (ISBN: 978-0-12-799947-0) (612 pages).

<http://www.sciencedirect.com/science/article/pii/B9780127999470000171>

2. Kotsilkova R, **Ivanov E**, Krusteva E, Silvestre C, Cimmino S, Duraccio D. Evolution of rheology, structure and properties around the rheological flocculation and percolation thresholds in polymer nanocomposites. In: "Ecosustainable Polymer Nanomaterials for Food Packaging" (Silvestre C, Cimmino S, Eds), Taylor & Francis Books, Inc., Ch.3 (2013) pp. 55-86, ISBN: 978-90-04-20737-0.

<https://www.taylorfrancis.com/books/e/9780429098123/chapters/10.1201/b13754-7>

3. Kotsilkova R, **E. Ivanov**, E. Krusteva. Polymer Nanocomposites of Epoxy Resin and Multiwall Carbon Nanotubes: Processing-Structure-Properties Relationships. In: Mechanics of Nanomaterials and Nanotechnology (Eds. V. Kavardzhikov, L.

Parashkevova, A. Baltov), Sci. Series, Bulgarian Academy of Sciences, Part II, Ch.1 (2012), 51-90, ISSN: 1314-3034.

[https://www.researchgate.net/publication/259867357\\_Polymer\\_nanocomposites\\_of\\_epoxy\\_resin\\_and\\_multiwall\\_carbon\\_nanotubes\\_processing-structure-properties\\_relationships](https://www.researchgate.net/publication/259867357_Polymer_nanocomposites_of_epoxy_resin_and_multiwall_carbon_nanotubes_processing-structure-properties_relationships)

4. **Ivanov E**, I. Borovanska, B. Milosheva, R. Kotsilkova. Experimental Nano and Micro Mechanics of Nanostructured Materials. In: Mechanics of Nanomaterials and Nanotechnology (Eds. V. Kavardzhikov, L. Parashkevova, A. Baltov), Sci. Series, Bulgarian Academy of Sciences, Part IV, Ch.3 (2012), 287-326, ISSN: 1314-3034.

[https://www.researchgate.net/publication/259867367\\_Experimental\\_Nano\\_and\\_Micro\\_Mechanics\\_of\\_Nanostructured\\_Materials](https://www.researchgate.net/publication/259867367_Experimental_Nano_and_Micro_Mechanics_of_Nanostructured_Materials)

**Cmamu:**

5. G. Spinelli, R. Guarini, R. Kotsilkova, **E. Ivanov**, L. Vertuccio, V. Romano, L. Guadagno. Joule heating effect in carbon-based epoxy resin: an experimental and numerical study. Bulgarian Chemical Communications, Volume 55, Issue 3, pp. 335-343, 2023. **SJR: 0.17; Q4**.

<http://www.bcc.bas.bg>

6. Giovanni Spinelli, Rosella Guarini, Rumiana Kotsilkova, Evgeni Ivanov and Vittorio Romano. Experimental, Theoretical and Numerical Studies on Thermal Properties of Lightweight 3D Printed Graphene-Based Discs with Designed Ad Hoc Air Cavities. Nanomaterials,13,1863, 2023. **IF: 5.719; Q1**.

<https://www.mdpi.com/2079-4991/13/12/1863>

7. Peng, Z., Lv, Q., Jing, J., Pei, H., Chen, Y. and **Ivanov, E**. FDM-3D printing LLDPE/BN@GNPs composites with double network structures for high-efficiency thermal conductivity and electromagnetic interference shielding. Composites Part B: Engineering. 251, p.110491, 2023. **IF: 11.322, Q1**.

<https://www.sciencedirect.com/science/article/pii/S1359836822008642>

8. Qinniu Lv, Zilin Peng, Yan Meng, Haoran Pei, Yinghong Chen, **Evgeni Ivanov**, Rumiana Kotsilkova. Three-Dimensional Printing to Fabricate Graphene-Modified Polyolefin Elastomer Flexible Composites with Tailorable Porous Structures for Electromagnetic Interference Shielding and Thermal Management Application. Industrial & Engineering Chemistry Research, 2022, 61, 16733–16746. **IF= 4.326, Q1**.

<https://pubs.acs.org/doi/abs/10.1021/acs.iecr.2c03086>

9. Giovanni Spinelli, Rumiana Kotsilkova, **Evgeni Ivanov**, Vladimir Georgiev, Carlo Naddeo, Vittorio Romano. Thermal and Dielectric Properties of 3D Printed Parts Based on Polylactic Acid Filled with Carbon Nanostructures. Macromolecular Symposia, 2022, Vol. 405, Issue 1, 2100244. **SJR: 0.25, Q3**.

<https://onlinelibrary.wiley.com/doi/10.1002/masy.202100244>

10. Giovanni Spinelli, Rosella Guarini, Rumiana Kotsilkova, **Evgeni Ivanov**, Dzhihan Menseidov, Vittorio Romano. Thermo-Electric Properties of Poly(lactic) Acid Filled with Carbon-Based Particles: Experimental and Simulation Study. Macromolecular Symposia, 2022, Vol. 405, Issue 1, 2100241. **SJR: 0.25, Q3**.

<https://onlinelibrary.wiley.com/doi/10.1002/masy.202100241>

11. Batakliiev, Todor, **Evgeni Ivanov**, Verislav Angelov, Giovanni Spinelli, and Rumiana Kotsilkova. Advanced Nanomechanical Characterization of Biopolymer Films Containing GNPs and MWCNTs in Hybrid Composite Structure" *Nanomaterials*, 2022, 12(4), 709. <https://doi.org/10.3390/nano12040709>. **IF: 5.076, Q1**.

<https://www.mdpi.com/2079-4991/12/4/709>

12. Spinelli G, Guarini R, Kotsilkova R, Batakliiev T, **Ivanov E**, Romano V. Experimental and Simulation Studies of Temperature Effect on Thermophysical Properties of Graphene-Based Polylactic Acid. *Materials*. 2022; 15(3):986. <https://doi.org/10.3390/ma15030986>. **IF: 3.748, Q2**.  
<https://www.mdpi.com/1996-1944/15/3/986>
13. Garcia, P. S., de Oliveira, Y. D. C., Valim, F. C. F., Kotsilkova, R., **Ivanov, E.**, Donato, R. K., Fechine, G. J. M., Andrade, R. J. E. Tailoring the graphene oxide chemical structure and morphology as a key to polypropylene nanocomposite performance. *Polym. Compos.* 2021, 42, 6213-6231. **IF: 3.171, Q2**.  
<https://onlinelibrary.wiley.com/journal/15480569>
14. Spinelli G, Guarini R, Kotsilkova R, **Ivanov E**, Romano V. Experimental, Theoretical and Simulation Studies on the Thermal Behavior of PLA-Based Nanocomposites Reinforced with Different Carbonaceous Fillers. *Nanomaterials*. 2021; 11(6):1511. **IF: 5.075, Q1**.  
<https://www.mdpi.com/2079-4991/11/6/1511>
15. **Evgeni Ivanov**, Todor Batakaliiev, Rumiana Kotsilkova, Martin Otto & Daniel Neumaier. Study on the Adhesion Properties of Graphene and Hexagonal Boron Nitride Monolayers in Multilayered Micro-devices by Scratch Adhesion Test. *Journal of Materials Engineering and Performance*, 2021, 30:5673–5681. **IF: 1.819, Q2**.  
<https://link.springer.com/article/10.1007/s11665-021-05877-z>
16. Todor Batakliiev, Vladimir Georgiev, Cristiane Kalupgian, Pablo A. R. Muñoz, Hélio Ribeiro, Guilhermino J. M. Fechine, Ricardo J. E. Andrade, **Evgeni Ivanov** & Rumiana Kotsilkova. Physico-chemical Characterization of PLA-based Composites Holding Carbon Nanofillers. *Applied Composite Materials*, 2021. **IF: 2.199, Q2**.  
<https://link.springer.com/article/10.1007%2Fs10443-021-09911-0#citeas>
17. Anna Paula Godoy, Leice G. Amurim, Alexandre Mendes, Emerson S. Gonçalves, Anderson Ferreira, Carolina Santos de Andrade, Rumiana Kotsilkova, **Evgeni Ivanov**, Marino Lavorgna, Lúcia A.M. Saito, Hélio Ribeiro, Ricardo J.E. Andrade. Enhancing the electromagnetic interference shielding of flexible films with reduced graphene oxide-based coatings. *Progress in Organic Coatings* 158 (2021) 106341. **IF: 4.81, Q1**.  
<https://www.sciencedirect.com/science/article/pii/S0300944021002125?via%3Dihub>
18. Batakliiev, T., Georgiev, V., Angelov, V., **Ivanov, E.**, Kalupgian, C., Muñoz, P., Fechine, G., Andrade, R., Kotsilkova R. Synergistic Effect of Graphene Nanoplatelets and Multiwall Carbon Nanotubes Incorporated in PLA Matrix: Nanoindentation of Composites with Improved Mechanical Properties. *Journal of Materials Engineering and Performance* (2021). **IF: 1.819, Q2**.  
<https://doi.org/10.1007/s11665-021-05679-3>.
19. Gorokhov, G.; Bychanok, D.; Gayduchenko, I.; Rogov, Y.; Zhukova, E.; Zhukov, S.; Kadyrov, L.; Fedorov, G.; **Ivanov, E.**; Kotsilkova, R.; Macutkevic, J.; Kuzhir, P. THz Spectroscopy as a Versatile Tool for Filler Distribution Diagnostics in Polymer Nanocomposites. *Polymers* 2020, 12, 3037. **IF: 3.426, Q1**.  
<https://www.mdpi.com/2073-4360/12/12/3037>
20. Spinelli, G.; Kotsilkova, R.; **Ivanov, E.**; Georgiev, V.; Ivanova, R.; Naddeo, C.; Romano, V. Dielectric Spectroscopy and Thermal Properties of Poly(lactic) Acid Reinforced with Carbon-Based Particles: Experimental Study and Design Theory. *Polymers* 2020, 12, 2414. **IF: 3.426, Q1**.  
<https://www.mdpi.com/2073-4360/12/10/2414#cite>

21. Shaohong Shi, Zilin Peng, Jingjing Jing, Lu Yang, Yinghong Chen, Rumiana Kotsilkova, and **Evgeni Ivanov**. Preparation of Highly Efficient Electromagnetic Interference Shielding Poly(lactic Acid)/Graphene Nanocomposites for FDM 3D Printing. *Industrial & Engineering Chemistry Research*, 2020, 59 (35), 15565-15575, DOI: 10.1021/acs.iecr.0c02400. **IF: 3.573, Q1**.
- <https://pubs.acs.org/doi/10.1021/acs.iecr.0c02400>
22. V. A. Angelov, T. T. Batakliiev, V. F. Georgiev, **E. H. Ivanov**, R. K. Kotsilkova. Preparation and electromagnetic properties of epoxy/organoclay/MWCNT/gold nanocomposites. *Bulgarian Chemical Communications*, Volume 52, Issue 2 (pp. 297-299) 2020. **SJR: 0.142, Q4**.
- [http://www.bcc.bas.bg/BCC\\_Volumes/Volume\\_52\\_Number\\_2\\_2020/BCC-52-2-297-299-Angelov-BCS-2.pdf](http://www.bcc.bas.bg/BCC_Volumes/Volume_52_Number_2_2020/BCC-52-2-297-299-Angelov-BCS-2.pdf)
23. Kotsilkova, R.; **Ivanov, E.**; Georgiev, V.; Ivanova, R.; Menseidov, D.; Batakliiev, T.; Angelov, V.; Xia, H.; Chen, Y.; Bychanok, D.; Kuzhir, P.; Di Maio, R.; Silvestre, C.; Cimmino, S. Essential Nanostructure Parameters to Govern Reinforcement and Functionality of Poly(lactic) Acid Nanocomposites with Graphene and Carbon Nanotubes for 3D Printing Application. *Polymers* 2020, 12, 1208. **IF: 3.426, Q1**.
- <https://www.mdpi.com/2073-4360/12/6/1208#cite>
24. Radost Ivanova, Rumiana Kotsilkova, **Evgeni Ivanov**, Ricardo K. Donato, Guilhermino J.M. Fechine, Ricardo J.E. Andrade, Rosa di Maio, ClaraSilvestre. Composition dependence in surface properties of poly(lactic acid)/graphene/carbon nanotube composites. *Materials Chemistry and Physics*, 2020. **IF: 2.88, Q2**.
- <https://www.sciencedirect.com/science/article/abs/pii/S0254058420300845>
25. Spinelli, G.; Kotsilkova, R.; **Ivanov, E.**; Petrova-Doycheva, I.; Menseidov, D.; Georgiev, V.; Maio, R.D.; Silvestre, C. Effects of Filament Extrusion, 3D Printing and Hot-Pressing on Electrical and Tensile Properties of Poly(Lactic) Acid Composites Filled with Carbon Nanotubes and Graphene. *Nanomaterials* 2020, 10, 35. **IF: 4.034, Q1**.
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26. Spinelli, G.; Lamberti, P.; Tucci, V.; Kotsilkova, R.; **Ivanov, E.**; Menseidov, D.; Naddeo, C.; Romano, V.; Guadagno, L.; Adami, R.; Meisak, D.; Bychanok, D.; Kuzhir, P. Nanocarbon/Poly(Lactic) Acid for 3D Printing: Effect of Fillers Content on Electromagnetic and Thermal Properties. *Materials* 2019, 12, 2369. **IF: 2.972, Q2**.
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27. Batrakov, K. G., Volynets, N. I., Paddubskaya, A. G., Kuzhir, P. P., Prete, M. S., Pulci, O., **Ivanov, E.**, Kotsilkova, R., Kaplas, T. and Svirko, Y. (2019) Stretching and Tunability of Graphene-Based Passive Terahertz Components. *Phys. Status Solidi B*. doi:10.1002/pssb.201800683; **IF: 3.729, Q2**.
- <https://onlinelibrary.wiley.com/doi/10.1002/pssb.201800683>
28. M. V. Shuba, D. I. Yuko, G. Gorokhov, D. Meisak, D. S. Bychanok, P. P. Kuzhir, S. A. Maksimenko, P. Angelova, **E. Ivanov** and R. Kotsilkova. Frequency and density dependencies of the electromagnetic parameters of carbon nanotube and graphene nanoplatelet based composites in the microwave and terahertz ranges *Mater. Res. Express* 6, 095050 (2019). **IF: 1.449, Q2**.
- <https://iopscience.iop.org/article/10.1088/2053-1591/ab2edf>
29. Rumiana Kotsilkova, Ivanka Petrova-Doycheva, Dzhihan Menseidov, **Evgeni Ivanov**, Alesya Paddubskaya, Polina Kuzhir. Exploring thermal annealing and graphene-carbon nanotube additives to enhance crystallinity, thermal, electrical and tensile properties of aged poly(lactic) acid-based filament for 3D printing. *Composites Science and*

Technology, 181 (2019) 107712. **IF: 6.309, Q1.**

<https://www.sciencedirect.com/science/article/pii/S0266353819313193?dgcid=coauthor>

30. G. Gorokhov, D. Bychanok, D. Meisak, I. Shlyk, A. Liubimau, P. Angelova, C. Menseidov, **E. Ivanov**, R. Kotsilkova, M. Casa, P. Ciambelli and P. Kuzhir. Carbon nanotubes vs graphene nanoplatelets for 3D-printable composites. 2019, IOP Conference Series: Materials Science and Engineering, 503, 012010. **SJR: 0.19.**

<https://iopscience.iop.org/article/10.1088/1757-899X/503/1/012010/meta>

31. **Evgeni Ivanov**, Rumiana Kotsilkova, Hesheng Xia, Yinghong Chen, Ricardo K. Donato, Katarzyna Donato, Anna Paula Godoy, Rosa Di Maio, Clara Silvestre, Sossio Cimmino and Verislav Angelov. PLA/Graphene/MWCNT Composites with Improved Electrical and Thermal Properties Suitable for FDM 3D Printing Applications. Appl. Sci. 2019, 9(6), 1209. **IF: 2.287, Q2.**

<https://www.mdpi.com/2076-3417/9/6/1209>

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86. **Иванов Е.** Износоустойчиви покрития от полиестерна смола с диамантени нанопълнители – методи за оптимизиране на състав и свойства. XXIV Научно-техническа конференция “Строителната наука в съвременната практика”; 6-14 Октомври 2006; София; “Лабиринт” ООД и ЕТ “Бони” (2006) 37-47. (**Ivanov E.** Wear-resistant coatings from polyester resin with diamond nanoparticles – methods for optimization of composition and properties. XXIV Scientific-Technical Conference „Building Science in Present Practice”; 6-14 October 2006; Sofia; „Labyrinth” OOD and ET „Boni”, 2006, 37-47).

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## Проекти

**Management Committee Member of “European Cooperation in Sciences and Technology” - COST Actions:**

1. Management Committee Member from NanoTechLab Ltd of CA COST Action CA19118 - High-performance Carbon-based composites with Smart properties for Advanced Sensing Applications 21/10/2020-20/10/2024.
2. Management Committee Member of CA COST Action CA15107 “Multi-Functional Nano-Carbon Composite Materials Network (MultiComp)”, 07/04/2016- 06/04/2020. Получено съфинансиране по COST CA15107 – договор ДКОСТ 01/7, 20.06.2017 от ФНИ, България.
3. Management Committee Member of MPNS COST Action MP1303 “Understanding and Controlling Nano and Mesoscale Friction”, 08/10/2013- 07/10/2017.
4. Management Committee Member of MPNS COST Action MP1105 “Sustainable flame retardancy for textiles and related materials based on nanoparticles substituting conventional chemicals (FLARETEX)”, 23/05/2012-22/05/2016.

**Координатор на проекти от ИМех-БАН:**

1. Collaborative Research Project between Sichuan University, China and OLEM-Institute of Mechanics, Bulgarian Academy of Sciences (2020-2023). Team Leader from Bulgarian Side: Prof. Dr. Evgeni Ivanov.
2. Bilateral Collaboration (BAS-CNR): “Multifunctional Graphene-Based Polymer Nanocomposites for 3D Printing Applications”. Bilateral Collaboration BAS-CNR, Italy (2019-2022). Coordinator for

Bulgaria Prof. Dr. E. Ivanov.

3. Co-financing of the COST CA15107 – contract DKOST 01/7, 20.06.2017 NSF, Bulgaria.

**Партньор в проекти за България, като Управител на НаноТехЛаб ООД с външно за България финансиране:**

1. MSCA-RISE „Reliable Electronics for Tomorrow’s Active Systems“, ReACTIVE Too (2020-2025).
2. H2020-Graphene Flagship Core 3 (2020 - 2023).
3. H2020-Graphene Flagship Core 2 (2018 - 2020).
4. H2020-MSCA-RISE-2016 Graphene 3D “Multifunctional Graphene-based Nanocomposites with Robust Electromagnetic and Thermal Properties for 3D-printing Application” (2017-2022).
5. H2020-Graphene Flagship Core 1 “Graphene-based disruptive technologies” (2016-2018).
6. Co-financing of the project Graphene Flagship “Graphene-Based Revolutions in ICT and Beyond” (2014-2016) from NSF, Bulgaria.
7. Graphene Flagship “Graphene-Based Revolutions in ICT and Beyond” (2014-2016). With a budget of €1 billion, the Graphene Flagship represents a new form of joint, coordinated research on an unprecedented scale, forming Europe’s biggest ever research initiative. The Graphene Flagship is tasked with bringing together academic and industrial researchers to take graphene from the realm of academic laboratories into European society in the space of 10 years, thus generating economic growth, new jobs and new opportunities.

**Участие в проекти с външно за България финансиране:**

1. Nano-XCT (FP7-NMP) "Compact X-ray computed tomography system for non destructive characterization of nano materials" (01.05. 2012-2015) – FP7 of EC. Coordinator for Bulgaria Prof. D. Sc. R. Kotsilkova (participant 20 months).
2. BY-NanoERA - (FP7-INCO) "Industrial developments of applied nanoelectronics", (01.11.2010- 30.10.2013) - FP7 of EC. Coordinator for Bulgaria Prof. D. Sc. R. Kotsilkova (participant 36 months).
3. Napolynet (FP7- NMP) "Setting up research intensive clusters across the EU on characterization of polymer nanostructures" (01.04.2008-31.03.2011r) - FP7 of EC. Coordinator for Bulgaria Prof. D. Sc. R. Kotsilkova (participant 36 months).
4. EC-FP7-NMP1-TeAm “Improving the Services of the NMP-NCP Network Trough Transnational Activities” (01.04.2009 - 30.09.2011). FP7 of EC. Coordinator for Bulgaria Prof. D. Sc. R. Kotsilkova (participant 6 months).
5. HUNTSMAN Collaborative research project: “An Understanding of the Rheology and Superstructure of Isocyanate-Nanoclay Dispersions”, Sponsored by Huntsman Polyurethanes, Belgium. (3 contracts X 3 months for 2009; 2010 and 2011 г.). Coordinator for Bulgaria Prof. D. Sc. R. Kotsilkova (participant 9 months).

**Участие в проекти с национално финансиране:**

1. European digital innovation hub in construction sector (EDIH) project. Supports small and medium-sized enterprises, public institutions and society in the process of the digital transformation of the construction industry.
2. Project № BG05M2OP001-1.002-0011 „Centre for Competence MIRACle – Mechatronics, Innovation, Robotics, Automation, Clean Technologies. (participant).
3. European Regional Development Fund within the OP “Science and Education for Smart Growth 2014 - 2020”, Project CoE “National center for/of mechatronics and clean technologies“, № BG05M2OP001-1.001-0008-C01. (participant).
4. Research Infrastructure Project OLEM (DO-02-53) "Setting up Open Laboratory on Experimental Mechanics of Micro-and Nanostructured Materials" – supported by National Science Fund - MES, Bulgaria (12.2008-12.2011). Coordinator Prof. D. Sc. R. Kotsilkova (participant 36 months).
5. ДНТС/India 01/10–24.06.2013 “Nano-photocatalysis membrane in energy conversion for water treatment”. Bilateral Collaboration Bulgaria-India; supported by National Science Fund - MES, Bulgaria (24.06.2013-23.06. 2016). Coordinator for Bulgaria Prof. D. Sc. R. Kotsilkova (participant 36 months).

6. Bilateral Collaboration (BAS-CNR): Structure and nanomechanics of nanoreinforced polymeric materials. Bilateral Collaboration BAS-CNR, Italy (2013-2015). Coordinator for Bulgaria Prof. D. Sc. R. Kotsilkova (participant 36 months).
7. Bilateral Collaboration (BAS-CNR): An Intergrated Approach to Designing Polymer Nanocomposites with Layered Silicates and Carbon Nanotubes. Bilateral Collaboration BAS-CNR, Italy (2010-2012). Coordinator for Bulgaria Prof. D. Sc. R. Kotsilkova (participant 36 months).
8. Bilateral Collaboration (BAS-CNR): Multifunctional Composites of Carbon Nanotubes and Alumina Nanofillers in Polymers for Engineering Applications. Bilateral Collaboration BAS-CNR, Italy (2007-2009). Coordinator for Bulgaria Prof. D. Sc. R. Kotsilkova (participant 12 monts).
9. D01-469/06 "New Polymer Nanocomposites for Electronic Purpose Applications", National Science Fund (2006-2010), Team Leader: Assist. Prof. Eng. E. Krusteva (participant 2009, 2010).
10. DO-02-138/15.12.2008 (2008-2010) "Mechanical and Structural Investigations of Polymer Nanocomposites with Industrial Application" National Science Fund (2008-2011) Coordinated by the Higher Transport School "T. Kableskov", NSF-BG Call: "Stimulating the Scientific Investigations in the State Higher Schools" (2008). Team leader: Prof. G. Zamfirova (participant 2009, 2010).
11. Human resources: "Support for Training and Realization for Ph.D. Students, Postdoctors and Young Scientists in Polymer Chemistry, Physics and Engineering." BG051PO001/07/3.3.-02/51, NSF, European Social Fund (2008-2010). Participant 2 years.

#### **Защитили докторанти:**

1. Редовен докторант Верислав Ангелов Ангелов – (01.01.2013 – 31.12.2015) – „Синергични ефекти на златни нанчастици и слоедти силикати в епоксидна смола“. по научна специалност 02.10.25 „Технология на композитните материали“. Научни ръководители: проф. дтн Р. Коцилкова и доц. д-р Е. Иванов. Защитил дисертационен труд за придобиване на образователната и научна степен „доктор“ на 04.04.2018 г.
2. Редовен докторант Поля Славчева Ангелова (01.01.2016 – 31.12.2018) – “Разработване на полимерен нанокompозит с графен и създаване на прототип чрез 3D печат“. Научна специалност: 5.6. Материали и материалознание (“Технология на композитните материали”). Научни ръководители: проф. д-р Е. Иванов проф. дтн Р. Коцилкова. Защитила дисертационен труд за придобиване на образователната и научна степен „доктор“ на 23.10.2019 г.
3. Редовен докторант Христиана Ангелова Величкова (01.10.2015 – 30.06.2019) – “Технология за получаване на хибридни нанокompозити с графен“. 5.6. Материали и материалознание (Технология на композитните материали). Научни ръководители: проф. д-р Е. Иванов проф. дтн Р. Коцилкова. Защитила дисертационен труд за придобиване на образователната и научна степен „доктор“ на 22.11.2019 г.
4. Редовен докторант Радост Иванова Иванова (01.10.2017 – 30.09.2020) – “Реология, структура и свойства при перколатионния праг на полимерни композити с графен и въглеродни нанотръби “. Докторантска програма: 5.6. Материали и материалознание (Технология на композитните материали). Научни ръководители: проф. д.т.н. Румяна Коцилкова и проф. д-р Евгени Иванов. Защитила дисертационен труд за придобиване на образователната и научна степен „доктор“ на 31.03.2021 г.

#### **Текущи докторанти:**

1. Редовен докторант магистър инж. Стилияна Стоянова, със срок на обучение 3 години (01.01.2023 – 31.12.2025 г.), по докторска програма 5.6. „Материали и материалознание (Технология на композитните материали)“, Съвместно обучение в ИМех-БАН и в Universite de technologie de Compiègne (UTC), Франция. Тема на докторантската работа: „Хибридно усилени полимери за умни и гъвкави композитни структури“. Ръководители: проф. дтн Румяна Коцилкова и проф. Евгени Иванов (съръководител).

#### **Консултант на докторанти:**

1. Редовен докторант Иванка Петрова (01.10-2012-30.09.2015) „Реология, механични и термични свойства на три-фазни полимерни нанокompозити“. Защитила дисертационен труд за придобиване на образователната и научна степен „доктор“ на 03.09.2018 г.
2. Задочен докторант Станислав Коцилков (2014 - 2017). Тема: „Безопасност и оценка на екологичния риск от полимерните нанокompозити прилагани за опаковки: технологични и правни аспекти“. Защитил дисертационен труд за придобиване на образователната и научна степен „доктор“ на 14.05.2018 г.

#### **Членство**

1. Съюз на учените в България