

PERSONAL INFORMATION

**Borislava Veselinoва Georgieva**

 72, Tsarigradsko Chaussee Blvd, 1784 Sofia (Bulgaria)

 b.georgiewa@abv.bg

WORK EXPERIENCE

2015–Present

**Chemical engineer**

Microwave Magnetic Laboratory, Institute of Electronics, Bulgarian Academy of Sciences, Sofia (Bulgaria)

<http://www.ie-bas.org/>

EDUCATION AND TRAINING

2016–Present

**PhD Student**

Bulgarian Academy of Sciences  
72 Tsarigradsko Chaussee Blvd, 1784 Sofia (Bulgaria)

Thesis: "Synthesis and investigation on multifunctional magnetic structures for microwave and electronic components"

2013–2015

**Master degree**

University of Chemical Technology and Metallurgy - Sofia, Faculty of Chemical Technology, Department of Technology of Inorganic and Electrochemical Production, Sofia (Bulgaria)

<http://dl.uctm.edu/bg/>

MS Thesis: Electrochemically deposited nanostructured ZnO layers on quartz crystal microbalance

2008–2013

**Bachelor degree**

University of Chemical Technology and Metallurgy Sofia, Bulgaria, Department of Technology of Inorganic and Electrochemical Production, Sofia (Bulgaria)

2003–2008

**Primary education**

119 School "Acad. Mihail Anaudov", Sofia (Bulgaria)

Humanities

PERSONAL SKILLS

Mother tongue(s)

Bulgarian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Cambridge ESOL, FCE, Council of Europe, Level B2 BRITANICA (Bulgaria), FCE, Level C1					

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
Common European Framework of Reference for Languages

**Job-related skills** Main research area: Physics  
 Subareas: nanosized magnetic oxides, magnetic materials, multiferroic materials, nano-powders, films, magnetic nano-composites and microwave absorbers, sensors.

Area: Chemistry

Subareas: magnetic nanoparticles preparation, thin and thick films, magnetic structure investigation, composite materials, diluted magnetic semiconductors, ZnO nanorods, electrodeposition of ZnO nanowire arrays, nanostructured ZnO - for device applications.

**Digital competence**

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Independent user	Independent user	Independent user	Independent user

Digital competences - Self-assessment grid

Good command of office suite (Word, Excel, PowerPoint)

Internet

Origin

Photoshop

**Other skills** Skills acquired:  
 Customs activity, Financial Management, Kinetics and catalysis, Photoshop, SEM, XRD, thick films, magnetic structure investigation, composite materials, diluted magnetic semiconductors

**Driving licence** B

**ADDITIONAL INFORMATION**

**Conferences** Participation in scientific forums and conferences

1. K. Lovchinov, M. Petrov, M. Ganchev, V. Georgieva, H. Nichev, B. Georgieva and D. Dimova-Malinovska, "Room-temperature sensitivity to NO<sub>2</sub> exposure of electrochemically-deposited nanostructured ZnO layers", 18th International Summer School on Vacuum, Electron and Ion Technologies, Sozopol, Bulgaria 7-11 October 2013. - Poster presentation
2. B. Georgieva, M. Petrov, K. Lovchinov, M. Ganchev, V. Georgieva and D. Dimova-Malinovska, "Application of electrochemically deposited nanostructured ZnO layers on quartz crystal microbalance for NO<sub>2</sub> detection" Satellite Workshop of the 18th International School on Condensed Matter Physics, Varna, Bulgaria, 2014. - Poster presentation
3. H. Nichev, B. Georgieva K. Lovchinov, M. Petrov, V. Georgieva, G. Alexieva, L. Vergov and D. Dimova-Malinovska, "Effect of quartz plate roughness on ZnO/QCM response to NO<sub>2</sub>", Fifth Regional Symposium on Electrochemistry – South East Europe (RSE- SEE), Pravets, Bulgaria, June 7-11, 2015. - Poster presentation
4. B. V. Georgieva, T. I. Koutzarova, S. M. Kolev, Ch. G. Ghelev, B. Vertruyen, R. Closset, R. Cloots and A. Zaleski "Study of quasi-monophase Y-type hexaferrite Ba<sub>0.5</sub>Sr<sub>1.5</sub>Zn<sub>2</sub>Al<sub>0.08</sub>Fe<sub>11.92</sub>O<sub>22</sub> powders", IX Spring Seminar of PhD students and young scientists from BAS institutes "Interdisciplinary Chemistry", 15-17 April 2016, Vitosha - Poster presentation
5. B. Georgieva, T. Koutzarova, S. Kolev, K. Krezhov, D. Kovacheva, Ch. G. Ghelev, B. Vertruyen, R. Closset, R. Cloots, A. Zaleski, "Structural and magnetic properties of Y-type hexaferrites", Third National Congress on Physical Sciences 29 September – 2 October 2016, Sofia, Bulgaria- Poster

presentation

6. Borislava Georgieva, Tatyana Koutzarova, Svetoslav Kolev, Kiril Krezhov, Daniela Kovacheva, "Characterization of  $Ba_2MgFe_{12}O_{22}$  Y-type hexaferrite powders", 11th Central Training School on Neutron Techniques 2017, 8 - 12 May, Budapest, Hungary - Oral and poster presentation
7. B. Georgieva, S. Kolev, Ch. Ghelev, B. Vertruyen, R. Closset and T. Koutzarova, "A comparative study of properties of Y-type hexaferrite powders obtained by sol-gel auto-combustion and sonochemical co-precipitation", Advanced Technologies for Detection and Defence Against CBRN Agents, NATO ASI, Sozopol 12 - 20 September 2017 - Oral and poster presentation
8. B. Georgieva, H. Nichev, M. Petrov, T. Koutzarova, V. Georgieva and D. Dimova-Malinovska, "Influence of loading QCMs with electrochemically-deposited ZnO on their  $NO_2$ -sensing properties", TWENTIETH INTERNATIONAL SUMMER SCHOOL ON VACUUM, ELECTRON AND ION TECHNOLOGIES, 25 - 29 September 2017, Sozopol - Poster presentation

#### Articles Publications

1. K. Lovchinov, M. Petrov, M. Ganchev, V. Georgieva, H. Nichev, **B. Georgieva**, D. Dimova-Malinovska "Room-temperature sensitivity to  $NO_2$  exposure of electrochemically-deposited nanostructured ZnO layers", Journal of Physics: Conference Series, 514, 2014, 012023 doi:10.1088/1742-6596/514/1/012023.
2. **B. Georgieva**, M. Petrov, K. Lovchinov, M. Ganchev, V. Georgieva, D. Dimova-Malinovska "Application of electrochemically deposited nanostructured ZnO layers on quartz crystal microbalance for  $NO_2$  detection" Journal of Physics: Conference Series 559, 2014, 012014 doi:10.1088/1742-6596/559/1/012014.
3. H. Nichev, **B. Georgieva**, K. Lovchinov, M. Petrov, K. Lovchinov, V. Georgieva, G. Alexieva, L. Vergov, D. Dimova-Malinovska, "Effect of quartz plate roughness on ZnO/QCM response to  $NO_2$ ", Bulgarian Chemical Communications, 48, Special Issue B, 2016, 60–65.
4. **B. V. Georgieva**, T. I. Koutzarova, S. M. Kolev, Ch. G. Ghelev, B. Vertruyen, R. Closset, R. Cloots and A. Zaleski "Study of quasi-monophase Y-type hexaferrite  $Ba_{0.5}Sr_{1.5}Zn_2Al_{0.08}Fe_{11.92}O_{22}$  powders" Bulgarian Chemical Communications, Volume 48, Special Issue G (pp. 147-150) 2016
5. **B. Georgieva**, K. Krezhov, S. Kolev, Ch. Ghelev, D. Kovacheva, M. Fabian, E. Svab, T. Koutzarova, "Characterization of Y-type hexaferrite  $Ba_2Mg_2Fe_{12}O_{22}$  powders", Proc. IEEE 40<sup>th</sup> International Spring Seminar on Electronics Technology, (2017) Art. Num. 17096890.

- Citations** B. Georgieva, M. Petrov, K. Lovchinov, M. Ganchev, V. Georgieva, D. Dimova-Malinovska, "Application of electrochemically deposited nanostructured ZnO layers on quartz crystal microbalance for  $NO_2$  detection" Journal of Physics: Conference Series 559, 2014, 012014 doi:10.1088/1742-6596/559/1/012014.

Cited in

- S. Öztürk, A. Kösemen, Z. A. Kösemen, N. Kılınc, Z. Ziya Öztürk, M. Penz, "Electrochemically growth of Pd doped ZnO nanorods on QCM for room temperature VOC sensors". Sensors and Actuators B: Chemical Volume 222, (2016), Pages 280–289.

**Memberships** Union of Physicists in Bulgaria

**Projects** Project DN 08/4 "Novel functional ferrites-based magneto-electric structures" funded by Bulgarian Science Fund

Project DFNP-17-159 "Investigation of new multiferroics - Y-type hexaferrites for magnetoelectronics" funded by BAS