PERSONAL INFORMATION

Bogdan Stavrev Ranguelov

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http://ipc.bas.bg/page/en/structural-units/laboratories/electron-microscopy/head-of-lab.php

Personal scientific ID:
Scopus: AU-ID ("Ranguelov, B." 15048629800).
ORCID: 0000-0003-0642-1220.

Date of birth 16/07/1970 | Nationality Bulgarian

WORK EXPERIENCE

2020 - present

Professor

Head of "Rostislav Kaischev" Institute of Physical Chemistry, Bulgarian Academy of Sciences, Acad. G, Bonchev Str. bl. 11, 1113, Sofia Bulgaria, http://ipc.bas.bg/

2011 - 2020

Associate professor

Head of laboratory "Electron microscopy and microanalysis", Institute of Physical Chemistry – Bulgarian Academy of Sciences, Acad. G, Bonchev Str. bl. 11, 1113, Sofia Bulgaria, http://ipc.bas.bg/

- fundamental and applied research in the area of physical chemistry

2001 - 2004

Research assistant

Inst. fur Theoretische Chemie, Uni " Friedrich Alexander" Nurnberg/Erlangen, Experimental group on HREELS spectroscopy and catalysis, Erlangen, Germany.

- Applied and fundamental research in the field of surface catalysis and surface materials science.

1996 - 2000

Research assistant

Laboratory Electron microscopy and microanalysis, operator of electron microscopes scanning JSM 5300, JSM 6390, transmission JEM 100B, micro analyser Super Probe JEOL 733, Optical microscopy, Inst. of Physical Chemistry – Bulgarian Academy of Sciences, Acad. G,Bonchev Str. bl. 11, 1113, Sofia Bulgaria, http://ipc.bas.bg/

- Fundamental and applied research in the field of physical chemistry, thin films and crystal growth

EDUCATION AND TRAINING

2005 - 2009

PhD in Physical chemistry

PhD thesis „Instability of vicinal crystal surfaces – step bunching", supervisor: Prof. Stoyan Stoyanov, DSc, Inst. of Physical Chemistry – Bulgarian Academy of Sciences

1990 - 1995

Master of Science degree

Physics, University of Sofia, Department of Physics

COLLABORATION

* **Centre Interdisciplinaire de Nanoscience de Marseille, CINaM**

  2D nucleation/growth and spiral growth on vicinal crystal surface Si(111), step density waves - REM (reflection electron microscopy) and biased diffusion of atomic clusters - LEEM (Low energy electron microscopy), homoepitaxy on Si(111) and Si(100).

* **Institute of Semiconductor Physics, Novosibirsk**

  epitaxial layer by layer growth on Si(111), step bunching – REM

SCIENTIFIC INTERESTS

Phase formation and phase transitions in condensed and soft matter physics, nucleation and crystal growth, epitaxy, electron microscopy and elemental analysis, materials science, computer modelling of phase transitions in condensed and soft matter physics – Molecular Dynamics, Monte Carlo.

SCIENTIFIC ACTIVITIES

* **Projects**

  Participant in 13 national and international scientific projects; Coordinator of bi-lateral scientific project under programme RILA, Bulgaria-France.

* **Supervisor**

  PhD supervisor (in association), PhD thesis “Synthesis and structure of glass-ceramics from metallurgical wastes”

* **Membership**

  Council representative for Bulgaria in the European Network of Crystal Growth ENCG, Member of the Executive Board of ENCG (2015-2022).
  Representative for Bulgaria in IUPAC, division Physical and Biophysical Chemistry (2023 -)
  IAB member of ECCG4 (Glasgow), ECCG5 (Bologna), ECCG7 (Paris), ICCGE2022 (Naples).
  Co-organizer of ECCG6 (Varna).

PERSONAL SKILLS

First language(s): Bulgarian

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
German	A2	A2	A1	A1	A1

Communication skills
- Excellent

Organisational / managerial skills
- Excellent

SELECTED PUBLICATIONS

in last 5 years

$PdSe_2$ single crystals synthesized by the self-flux method
Journal of Crystal Growth, 2024, DOI: 10.1016/j.jcrysgro.2024.127812
Marinova, V., Minev, N., Napoleonov, B., Karashanova, D., Rafailov, P., Kovacheva, D., Strijkova, V., Ranguelov, B., Mussi, V., Fuscaldo, W., Zografopoulos, D.C., Dimitrov, D.

Atomic Layer Deposition Growth and Characterization of Al_2O_3 Layers on Cu-Supported CVD Graphene,
Coatings, 2024, DOI: 10.3390/coatings14060662
Rafailov, P., Mehandzhiev, V., Sveshtarov, P., Blagoev, B., Terziyska, P., Avramova, I., Kirilov, K., Ranguelov, B., Avdeev, G., Petrov, S., Lin, S.H.

Translocation kinetics of vesicles through narrow pores
EPL, 2022, DOI: 10.1209/0295-5075/ac6c07
Ranguelov, B.; Milchev, A.

2D Monte Carlo Simulation of Cocrystal Formation Using Patchy Particles
Crystals, 2022, DOI: 10.3390/cryst12101457
Ranguelov, B.; Nanev, C.

2D Monte Carlo simulation of patchy particles association and protein crystal polymorph selection
Crystals, 2019, DOI: 10.3390/cryst9100508
Ranguelov, B.; Nanev, C.

Iron oxidation state effect on the Mg-Al- Si-O glassy system
Ceramics International, 2019, DOI: 10.1016/j.ceramint.2019.07.125
Ferreira, N.M.; Sarabando, A.R.; Atanasova, S.; Kukeva, R.; Stoyanova, R.; Ranguelov, B.S.; Costa, F.M.

Shape changes of two-dimensional atomic islands and vacancy clusters diffusing on epitaxial (111) interfaces under the impact of an external force
Journal of Crystal Growth, 2019, DOI: 10.1016/j.jcrysgro.2019.05.016
Curiotto, S.; Leroy, F.; Müller, P.; Cheynis, F.; Michailov, M.; El-Barraj, A.; Ranguelov, B.