

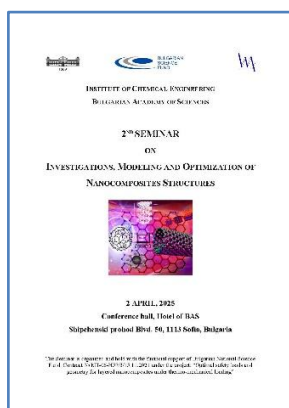
PREFACE

The present special issue of the journal Bulgarian Chemical Communications (BCC) contains selected papers from the presentations delivered at the 2nd SEMINAR ON INVESTIGATIONS, MODELING AND OPTIMIZATION OF NANOCOMPOSITES STRUCTURES. The Seminar was organized under the auspices of the Institute of Chemical Engineering (IChE) at the Bulgarian Academy of Sciences (BAS), as a leading organization for the implementation of the Contract № КП-06-Н57/3/15.11.2021 with the Bulgarian National Science Fund (BNSF) under the project: “Optimal safety loads and geometry for layered nanocomposites under thermo-mechanical loading”, project leader – prof. Tatyana Petrova.

The 1st SEMINAR ON INVESTIGATIONS, MODELING AND OPTIMIZATION OF NANOCOMPOSITES STRUCTURES was held on 23 April 2023 in Sofia, in the IChE - BAS. Both seminars are held with the financial support of BNSF, under the project mentioned above. We hope that these seminars are a good start for the development of new, modern scientific topics at the IChE and that the scientific

results reported at them, thanks to the open access and support of the BCC journal, will be widely disseminated.

The 2nd SEMINAR ON INVESTIGATIONS, MODELING AND OPTIMIZATION OF NANOCOMPOSITES STRUCTURES, is held on 2nd April, 2025, in the Conference hall, Hotel of BAS, 50 “Shipchenski prohod” blvd., 1113, Sofia (<https://amoravski.github.io/Chemists-Temp-Site/bg/SecondSeminar.htm>). About 22 active scientists from 6 institutes of BAS, 5 Bulgarian and two foreign universities, have participated in the Seminar by two plenary lectures, four key lectures, and 16 poster presentations. The scientific program was divided into sections on four different topics: NC – experimental; NC - modeling; NC - optimization; and NC - synthesis, structure, and applications. The main objection to such a selection was the consolidation of fundamental research with attempts to apply it to the understanding of nanocomposites design, to investigate experimentally and theoretically the behavior and properties of NCs, and their applications.



During the Seminar, there were invited plenary and key lectures: Prof. Wilfried Becker (Technical University of Darmstadt, Germany), Prof. Tsviatko Rangelov (Institute of Mathematics and Informatics – BAS), MSc. Alexander Moravski (Sofia University St. Kl. Ohridski), PhD, Margarita

Georgieva (Burgas State University, Prof. A. Zlatarov), assoc. Prof. Jenia Georgieva (Institute of Physical Chemistry, BAS), Prof. Tatyana Petrova (IChE-BAS). It is worth underlining the active participation of young scientists at the 2nd Seminar, both with oral presentations and with posters.

April 2025

Guest Editors:

Tatyana Petrova
Elisaveta Kirilova