

REPORT

of dissertation for the acquisition of:

educational and scientific degree " doctor "	X
scientific degree "Doctor of Science"	
	the true is indicated by the sign "X"

Author of the dissertation:

		Hristofor	Ivanov	Skandaliev	Club of aerospace technologies "Zodiac"
academic position	scientific degree	name	middle name	last name	workplace

Topic of the dissertation:

DEVELOPMENT AND CHARACTERIZATION OF ECOLOGICAL AND NON-TOXIC SOLID ROCKET PROPELLANTS

Scientific area:

5.	Engineering Sciences
code	name

Professional area:

5.10.	Chemical Technologies
code	name

Scientific specialty:

Technology of Natural and Synthetic Fuels)

The report was written by:

Prof.	DSc	Totyó	Ivanov	Totev	Trakia University – Stara Zagora
academic position	scientific degree	name	middle name	last name	workplace

1. Meeting the minimum requirements under the Regulations:

A) The candidate meets the minimum requirements	20 points	X
B) The candidate doesn't meet the minimum requirements	0 points	
		one of the answers given is marked with the sign "X"

It is mandatory to fill in if answer B is marked. The publication activity of the candidate is analyzed. The response of the results achieved (quoted) is analyzed.

In Appendix 5a, the candidate has presented their publication activity related to the dissertation. Following the verification, I found that it meets the minimum requirements, totaling 36.67 points.

2. The relevance of the topic of the dissertation:

A) The topic is relevant and new (there are no known results on the topic by other authors)	8 points	
B) The topic is relevant and results from other authors are known	6 points	X
C) The topic is not relevant, but results from other authors are known	2 points	
D) The topic is not relevant and no results from other authors are known	1 point	
E) The topic does not correspond to the level of dissertation	0 points	
		one of the answers given is marked with the sign "X"

The evaluation of the relevance of the dissertation must be substantiated

The relevance of the conducted research is substantiated primarily by the environmental aspects that accompany the use of chemical rockets. The total elimination of harmful substances in the environment (in the atmospheric air, as well as the accumulation of toxic substances in the Earth's lithosphere, hydrosphere, and biosphere) is impossible to achieve, but the striving for their reduction is an essential and important direction for any research task. When the formulation of such a task is combined with the application of theoretical and experimental research methods, as demonstrated by the PhD candidate, it possesses all the characteristics of an in-depth doctoral dissertation.

3. Type of research:

A) Theoretical	4 points	
B) Applied	4 points	
C) Theoretical with application elements	4 points	X
D) It does not correspond to the level of dissertation	0 points	
		one of the answers given is marked with the sign "X"

The level of research must be substantiated if answer D is marked.

4. Objectives of the research:

A) Realistic and of scientific and / or applied interest	8 points	X
B) Realistic, but not of scientific and / or applied interest	3 points	
C) Unattainable (unrealistic)	0 points	
		one of the answers given is marked with the sign "X"

Objectives must be specified. The type of the set objectives must be justified.

The objectives of the presented doctoral dissertation are largely substantiated by the primary task that the PhD candidate sets in their work, namely: Development of new solid rocket propellants that possess high safety during their production, storage, and operation, as well as a reduced environmental footprint. At the expense of the energy characteristics of the newly developed propellants, alternative formulations have been proposed that satisfy the criteria for safety, accessibility, and a lower environmental footprint.

5. Contributions of the dissertation:

A) With lasting scientific and / or applied response, they form the basis for new research and applications	20 points	
B) They are of significant scientific and / or applied interest, complete and / or summarize previous research	16 points	X
C) They are of scientific and / or applied interest	12 points	
D) Lack of significant contributions	8 points	
E) Lack of contributions	0 points	
		one of the answers given is marked with the sign "X"

Contributions must be specified. The type of results achieved must be justified.

I accept the 11 contributions formulated by the PhD candidate, categorizing them respectively into:

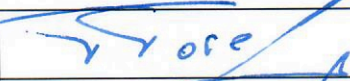
- Scientific and applied contributions – contributions No. 1, 2, 3, 4, 5, 7.
- Applied contributions – contributions No. 6, 8, 9, 10, 11

6. Conclusion

A) The evaluation of the dissertation is POSITIVE	This evaluation is assigned to a total number of at least 40 points	X
B) The evaluation of the dissertation is NEGATIVE	This evaluation is assigned to a total number below 40 points	
		one of the answers given is marked with the sign "X"

To be filled in at the request of the member of the scientific jury

I consider the presented thesis to be of doctoral standard, the research to be thoroughly conducted, and the results achieved to be convincing. I express my satisfaction with the work performed by the doctoral student and propose that the Honorable Jury award the educational and scientific degree of 'Doctor' (PhD) to Mag. Eng. Hristofor Skandaliev.

29.05.2026	The report was written by:	
date		signature