

Editorial

Coatings 2023 Best Paper Award (Article): Announcement and Interview with the Winning Team

Coatings Editorial Office

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The Coatings Editorial Board and Editorial Team would like to congratulate the winner of the Coatings 2023 Best Paper Award (Article). After a thorough evaluation of the originality and significance of the papers, citations, and downloads, we congratulate the authors of the paper “Fabrication of Thermal Plasma Sprayed NiTi Coatings Possessing Functional Properties” as the winner and wish them all the best in their future scientific career.

Information of the Rewarded Paper

Title: Fabrication of Thermal Plasma Sprayed NiTi Coatings Possessing Functional Properties

By Sneha Samal, Ondřej Tyc, Jan Cizek, Jakub Klecka, František Lukáč, Orsolya Molnárová, Esther de Prado, Zdeněk Weiss, Jaromír Kopeček, Luděk Heller, Petr Šittner and Tomáš Chráska

Coatings **2021**, *11*(5), 610; <https://doi.org/10.3390/coatings11050610>.

This paper is the outcome of a joint collaboration of two groups from the Institute of Physics (IoP) and the Institute of Plasma Physics (IPP), Czech Academy of Sciences in Prague, Czech Republic.

Biographical Statement of the Winner Team

Dr. Sneha Samal presently works as a scientist in the Department of Functional Materials Group of IoP. She has 15 years of experience in the thermal plasma and powder metallurgy fields.

Dr. Ondřej Tyc is currently a postdoctoral researcher at IoP and his specialization is in the area of mechanical characterization of NiTi samples. He conducts material research on shape memory alloys, heat treatments, and TEM microscopy.

Dr. Jan Cizek is an Associate Professor at IPP. His research focuses on cold kinetic spray technology, thermal spray technologies, and, lately, materials for nuclear fusion/fission.

M.Sc. Jakub Klecka is a Ph.D. student at IPP. His research focuses on thermal spray technologies; in particular, the RF-ICP method.

Dr. Frantisek Lukáč is a researcher at IPP. He is an expert in X-ray diffraction and his research focuses on high-entropy alloys.

Dr. Orsolya Molnárová is a postdoctoral researcher at IoP. Her research is mostly focused on specialized microscopy.

Dr. Esther de Prado is a postdoctoral researcher at IoP. Her research is focused on the analysis of the microstructure of materials (polycrystalline, thin films, and single crystal) through X-ray diffraction techniques.

Dr. Zdeněk Weiss is a senior scientist at the IoP and the head of the GD-OES laboratory. He is responsible for analytical applications of GD-OES, and for supporting other research groups throughout IoP, both for bulk and depth profile analysis. His work also involves methodology and the fundamentals of GDOES.

Dr. Jaromír Kopeček has worked at IoP for 24 years. He is interested in relation of crystal structure, microstructure, and functional properties, mainly in metals and intermetallics. He is currently the head of a laboratory equipped with SEM Tescan FERA 3.



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Dr. Luděk Heller is a senior scientist at IoP, who has been in the field of shape memory alloys for more than 15 years. He has a wide experience in shape memory alloy materials behavior in mechanical characterization.

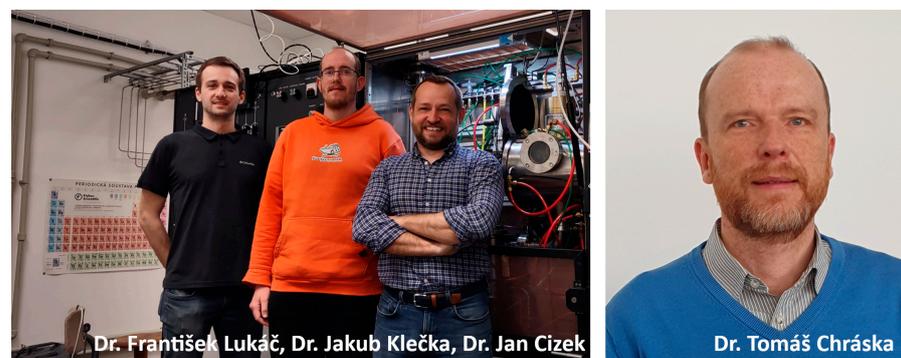
Dr. Petr Šittner was appointed as the head of the Department of Functional Materials of IoP in 2009, and currently holds the same position. He has been active in the research field of martensitic transformations and shape memory alloys for over 30 years. His current research focuses on functional thermomechanical behavior of NiTi-based shape memory alloys using thermomechanical testing.

Dr. Tomáš Chráska is the head of the Plasma Chemistry and Materials section at IPP. His research interests are mainly in nanostructured materials, materials characterization, and interfaces in thermally sprayed materials.

IoP team photo:



IPP team photo:



Interview with the Winning Team

1. What's your current research and why did you choose this research field?

Our research currently focuses on shape memory alloys (IoP) and thermal and cold spraying (IPP). Presently, we are pursuing the research of shape memory alloys by means of powder metallurgy and involving thermal plasma spray technology. Our groups have more than 20 years of experience in shape memory alloys (IoP) and plasma spraying (IPP). One of the reasons to choose this research was the potential use of NiTi outside the shape memory alloy field, as corrosion and abrasion protection. Here, the path through surface coatings presented yet another stimulus.

2. What research topics do you think are of particular interest to the research community in the coming years?

We think that the hot topics for the near future are those related to the design of multi-functional materials by using new technologies with an environmentally friendly mode of operation. Employing such a strategy will directly contribute, for instance, to the development of wear-resistant materials. These are inherently linked to the additive manufacturing sector, maximizing the efficiency and opening new routes for components production.

3. Have you ever encountered any difficulties when you conducted this research? How did you overcome them?

Given the novelty of this study, one of the difficulties we faced was the lack of available related studies. This made finding the correct parameters for the materials production somewhat more difficult. Furthermore, we needed to establish new, tailored shape memory properties testing methodology. In both cases, we managed to find a solution based on our long-term experience in both thermal spray and SMA fields.

4. What qualities do you think young scientists need?

They definitely need new ideas and motivation, as well as critical thinking. Probably, the most important qualities a young talent needs to develop a strong career in science are a positive "can do" attitude and curiosity, at the verge of passion. Eventually, he/she is going to learn all the other things along the way.

5. When and how did you access *Coatings*? What prompted you to submit your work to *Coatings*?

Upon reading the scope of the journal, we realized that there was a strong overlap with our present research topic.

6. We are an Open Access journal; how do you think Open Access impacts readers and authors?

Open access journals open boundaries for readers and researchers from the world of the general public, providing a unique opportunity to learn. Therefore, for authors, the open access mode allowed us to reach out to a broader public and potentially instigate a wider response.

7. Can you briefly describe the key to a happy laboratory life?

A happy laboratory life is based on the freedom of one's own topic selection and carrying out work that gives one satisfaction.

Conflicts of Interest: The authors declare no conflict of interest.

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