



INTRODUCTION

Second Materials Science Researchers Meeting: Insights from conference articles and future directions

I. Aguiar¹ · L. Arizaga¹ · A. De León¹ · S. Favre² · M. Ibáñez³ · C. J. Pereyra² · M. E. Pérez Barthaburu⁴ · S. Pons⁵ · M. Rodríguez Chialanza⁴ · M. Romero¹ · M. Silva² · A. Varela⁵

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In 2017, an interdisciplinary group of ten Uruguayan chemists, physicists, and engineers, organized the First Materials Science Researchers' Meeting in Uruguay. This event took place in April 2018 in Montevideo, Uruguay. It had 138 participants. Support was received from industry companies, public institutions, and had the endorsement of the Materials Research Society. A special issue of *MRS Advances* featured nine articles from that event, involving modified natural materials for environment remediation and energy applications, inorganic nanoparticles, polymers, and materials for wood industry among others.

A second conference was held in April 2023 in Montevideo, Uruguay, with endorsement from the Materials Research Society, drawing a significant regional interest with over 160 participants. Among them, 56% were from Uruguay, 33% from Brazil, 7% from Argentina, and the remainder from Chile and Spain. The gender distribution of participants was equitable. Three international guest researchers and six local researchers were again featured. Also, a total of 13 oral presentations and 115 posters were part of the program. This issue of *MRS Advances* includes 19 outstanding selected works presented at the conference. In this case, the number of accepted works doubled compared to the previous issue.

The papers cover a wide range of topics, reflecting the current trends in materials science research in the region. Some articles focus on traditional topics such as alloys, metal composites, and newer areas, like the synthesis and characterization of glasses. Others highlight the active research in theoretical studies, including investigations into synthesis conditions of titanates, adsorption of compounds on MXenes, and phase separation in alloys. Additionally, there is representation of emerging fields, such as the synthesis and characterization of inorganic nanoparticles, nanoperovskites, and biosynthesized particles. Moreover, this issue of *MRS Advances* includes articles showcasing various approaches to sustainable materials. For instance, one article aims to enhance soil properties as a construction material by incorporating agrowastes. Another article explores the modification of natural materials like clays for photodegradation, while another focuses on synthesizing mycelium-based foams using agrowastes. Lastly, the biomedical field is represented with articles discussing polymers and nanohybrids for various applications.

Furthermore, with more than 50% of the published works overall reporting advancements in postgraduate studies and young researchers, this underscores the region's commitment to nurturing talent and fostering research in materials science. Science on the continent has a solid base in the training of human resources that is acknowledged throughout the world. Funding in science and, particularly in materials science tends to be insufficient in experimental areas like this, where expensive equipment with high maintenance costs is required. Events of this nature are crucial for fostering closer communication among researchers, optimizing resources, sharing equipment, and facilitating the robust training of students, discussing topics that allow the advancement of the frontier of materials science in this region.

✉ I. Aguiar
iaguiar@fq.edu.uy

¹ Facultad de Química, Universidad de la República, Montevideo, Uruguay

² Facultad de Ingeniería, Universidad de la República, Montevideo, Uruguay

³ Centro Universitario Regional Noreste, Universidad de la República, Rocha, Uruguay

⁴ Centro Universitario Regional del Este, Universidad de la República, Rocha, Uruguay

⁵ Facultad de Arquitectura, Diseño y Urbanismo, Universidad de la República, Montevideo, Uruguay

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