

Foreword

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• The 4th Conference on Nuclear Analytical Techniques (NAT2020) was held in Daejeon, Korea during November 12–13, 2020. It was organized by Korean Committee on Activation Analysis (KCAA) in association with Korean Committee of Mössbauer Spectroscopy, Korean Committee of Positron Annihilation Spectroscopy, and Korea Retrospective Dosimetry Network (KREDOS). This conference was jointly held with the 6th Symposium on Radiation in Medicine, Space, and Power (RMSP) organized by Graduate School of Convergence Sciences and Technology, Seoul National University, to explore radiation applications. All sessions and meetings during the conference were conducted both online and in person, and strictly controlled according to the social distancing regulations of the COVID-19 pandemic for the safety of participants. There were four plenary lectures by Professor Amares Chatt from Dalhousie University, Professor Richard Ambrosi from University of Leister, professor Yang-Ki Hong from University of Alabama and Dr. Jakub Navarik from Palacky University. In addition, 27

invited talks and 114 contributed talks and posters were presented. Among these, 22 full papers of NAT2020 and RMSP have been accepted after peer review for publication in this special issue of JRNC. We covered the scope of radiation sciences to applications in nuclear analytical techniques. The following sessions were organized by experts recommended by the associated academic committees (shown in parentheses):

- Radiation in Medicine, Space and Power (Hwiyoung KIM, Jaecheong LIM)
- Radiation Dosimetry in Radiological Emergency (Yasuda HIROSH, Hyengtaek, KIM)
- Applications of Nuclear Analytical Techniques (NATs) (Hanrim LEE, K.B. DASARI)
- Instrumentations and sensors for NATs (Geehyun KIM, Byunggun PARK)
- Analysis of Environmental Hazardous Substances and Fine Dust (Sungyeol CHOI, Man LEE)

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Fig. 1 The audience at the conference. Limited number of participants were allowed following the COVID-19 guidelines



Fig. 2 All sessions and meetings during the conference were conducted both online and in person

- RI/In-beam Mössbauer Spectroscopy and Applications (Youngrang UHM)
- RI/In-beam Positron Annihilation Spectroscopy and Applications (Jaegi LEE)

There were some confusion and uncertainty before the conference due to COVID-19. But it was successfully organized in Daejeon, a city of science and education in South Korea, which existed like an island separated from the rest while the world was impacted with COVID-19. We were able to assemble and discuss the continued development of nuclear science and its future. Most of the Korean participants joined in person and the overseas participants virtually. The organizing committee had put an effort to overcome the difficulties such as time difference of participants's locations and network issues, and made it a highly successful conference. It was an excellent platform for the NAT experts and students who were tired and frustrated by the limitation of academic exchange of their research experiences and achievements imposed by COVID-19 restrictions. We will continue to move forward without shying away from the challenges that lie ahead of mankind. I would like to express my deepest gratitude to the ICAA board members, JRNC editors, and reviewers of the special issue for their great help in the successful hosting of NAT2020 & RMSP and the publication of these selected papers (Figs. 1, 2).

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Daejeon, Korea, September 2021

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