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The 16th Asada award (November 5, 2021)

The recipient of the 16th Asada Award, which is presented by the Discussion Group of X-ray analysis, Japan, in memory of the late Professor Ei-ichi Asada (1924–2005) to promising young scientists in X-ray analysis fields in Japan, is Atsushi Ohbuchi (Rigaku Corporation, “Development of highly sensitive benchtop X-ray diffraction and evaluation of environmental materials as multifaceted approaches”). The ceremony was held

during the 57th Annual Conference on X-Ray Chemical Analysis, which took place virtually.

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Denver X-ray Conference comes back to real (March 1, 2022).

The 71st Denver X-ray Conference (DXC2022) will be held as an in-person conference. Even in the earlier stage of the COVID-19 pandemic, the Denver Conference was not cancelled but was organized in unique virtual format. At that time, many other conferences were just cancelled or postponed. Later the use of internet base conference system has become popular for anybody else. The Denver Conference has continued for 71 years, and finally, after

two years' patience, it will come back to real. The conference will take place at Bethesda North Marriott Hotel and Conference Center in Rockville, Maryland, USA, from August 1 to 5, 2022. For further information, visit the Web page, <http://www.dxcicdd.com/>

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Email: kenji.sakurai@sakuraixlab.com**Book, “X-Ray Fluorescence in Biological Sciences: Principles, Instrumentation, and Applications” (Eds. Vivek Kumar Singh, Jun Kawai, and Durgesh Kumar Tripathi, Wiley, 2022)**

Recently, a new XRF book has been published from Wiley, edited by Dr. Vivek Kumar Singh (University of Lucknow, India), Professor Jun Kawai (Kyoto University, Japan) and Dr. Durgesh Kumar Tripathi (Amity University, India). The book consists of the following six parts: (1) General Introduction, (2) Synchrotron Radiation XRF, (3) Total Reflection XRF, (4) Beginner's Guide, (5) Application to Biological Samples and (6) Special Topics and Comparison with Other Methods. The first three parts give a systematic survey on the latest achievements in XRF, and the subsequent part is a helpful guide for pure biologists, who are not always very much familiar with physical analytical techniques such as XRF. The final two parts provide a detailed and practical explanation on the application of XRF spectrometry to biological, medical, food, environmental, and plant analysis, with many examples. XRF is basically non-destructive and gives much smaller damages even on fairly delicate

biological specimens compared with other methods. Therefore, one can use the same samples for other measurements after trying XRF first. Its recent progresses have brought highly reliable quantitative analysis with enhanced signal-to-background ratio, leading to the capability of detecting extremely small amount. The book is a compilation of the articles contributed by 39 authors from all over the world, Algeria, Argentina, Bangladesh, China, Egypt, India, Italy, Japan, Mongolia, Slovenia, South Korea, Turkey, Russia and Spain. The book consists of 688 pages. For further information of the book, see the following page, <https://www.wiley.com/en-us/X+Ray+Fluorescence+in+Biological+Sciences:+Principles,+Instrumentation,+and+Applications-p-9781119645542>

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Kenji Sakurai, News Editor**Correspondence**Email: kenji.sakurai@sakuraixlab.com**The materials project – Database and toolbox for materials science**

So far, numerous databases have been built around the world that summarize a large number of physical and chemical properties, thermodynamical diagrams, crystal structures, and some other useful experimental and calculated data. It is extremely useful for checking and confirming various properties of known materials and, conversely, for discovering promising candidates for functions and properties of interest. Furthermore, one of the remarkable recent trends is employment of deep learning, which is known as the 3rd generation of artificial intelligence, to explore some knowledge and models using already stored big data and some optimized algorithms. The system also includes a platform for quantum mechanical calculation. The Materials Project, established in 2011 by Professor Kristin Persson of Lawrence Berkeley National Laboratory, is an open-access database. Anyone can register as a user and start using it for free of charge. More than 120,000 users have already

registered. From the perspective of X-ray experts, the system should be very interesting, because it includes many experimentally collected X-ray absorption spectra, the crystal structure data, and the related quantum mechanical calculation data. The total number of the registered data exceeds 500,000; X-ray spectra and crystal structure data are nearly 20% and 35%, respectively, and others are more theoretical data, such as the density of states, the bond structures and so forth. The Materials Project organizes seminars and annual workshop as well. All of the archives are available on its Youtube site (<https://www.youtube.com/c/MaterialsProject>). For further information, visit the following page, <https://materialsproject.org/>

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