

Development of new mass spectrometer : measure what is measurable, and make measurable what is not so

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Continuous technological developments will enable new analytical methodologies to derive geochemical information from the samples. Based on the rapid growth in analytical capabilities demonstrated in last decade, a realistic prospect is that the mass spectrometry techniques, including SIMS, ICPMS, TIMS, IRMS, or Noble-MS, have immediate potential as a reconnaissance method for both the *in-situ* stable isotope geochemistry or isotope chronology. Now the mass spectrometry technique has evolved into a unique analytical approach, not the alternative choice.

One of the small but noticeable contributions of our analytical techniques covers variety of geochemical and biochemical study areas. These were achieved through discussion across the study areas and intensive development of the cutting-edge techniques. To maintain continuous progress in these research manner, both the planning of the long-term research strategies and creation of new analytical concept, together with financial supports, are highly desired. In this talk, we would like to describe the future direction of the instrumental developments and possible future contribution of the geochemistry onto the study areas in Earth Sciences.

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