A development of XRF/XDF analytical microscope

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In order to decode rhythms and events of Earth's environment recorded by such sediments as BIFs, a number of continuous sequences of the sediments several tens meters long have been sampled and effective tools to analyze such samples have been provided. For instance, Scanning X-ray Analytical Microscope (SXAM) has been utilized in Nagoya University, which enables us to acquire x-ray fluorescence maps representing chemical composition facilely. We try to develop new type of SXAM to measure mineral composition by detecting diffraction x-ray in addition to fluorescence x-ray. In this study, a diffraction pattern which could be obtained by new SXAM is simulated with a computer, and the result is presented. We expect that the instrument will be applied to various fields of disciplines.