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Synchrotron radiation for cultural heritage

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In recent years, the development of synchrotron radiation (SR) sources has resulted in the creation of beamlines tailored for studying cultural heritage materials. These beamlines often require specialized setups, specific spatial resolutions, and precise detection limits. In cultural heritage research, integrated approaches that combine multiple techniques are often essential. Some beamlines at large facilities enable various types of measurements to be taken at the same analysis point, supplementing preliminary data typically obtained through conventional laboratory or portable in situ methods. This presentation will review the past decade of synchrotron applications in cultural heritage studies, discussing the challenges and advancements in methods and techniques. The potential of synchrotron techniques will be illustrated through different case studies, for instance on a particular type of painted ceramics, demonstrating how a combination of SR-based methods can address diverse research questions.

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