$\label{thm:condition} \begin{tabular}{ll} Time-resolved studies & on & Materials & using & Synchrotron & Radiation at the ESRF \\ \end{tabular}$

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Time-resolved studies at the European Synchrotron Radiation Facility in Grenoble are becoming more and more important and span a wide range of fields of applications. The talk will outline the possibilities at the ESRF including X-ray sources, beamlines, detectors and auxiliary equipment.

The talk will be illustrated by examples of work performed on self-generated high temperature synthesis, batteries, annealing processes, phase transitions, grain growth as well very fast reactions on photo-dissociation.

Keywords: synchrotron radiation, time-resolved studies, chemical reactions