

DAFNE-Light DXR1 Soft X-ray Synchrotron Radiation Beamline: Characteristics and Applications.

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X-ray Absorption Fine Structure Spectroscopy (XAFS) is a powerful technique to investigate local atomic geometry and the chemical state of the atoms in different types of materials specially if lacking of long-range order like nanomaterials, liquids, amorphous and highly disordered systems, polymers containing metallic atoms, etc. The DAFNE-Light DXR1 beam line is mainly dedicated to soft X-ray absorption spectroscopy; it collects the radiation of a wiggler magnet and covers the energy range from 0.9 keV to 3.0 keV or the range going from the K-edge of Na through to the K-edge of Cl. From the end of 2018, using the SDD ARDESIA detector, it will also be possible to perform XAFS measurements in fluorescence mode. The performance of the beamline will be shown together with XAFS data obtained on several reference compounds and in different studies.

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