Abstract Submitted
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The X-ray Correlation Spectroscopy Instrument at the LCLS AYMERIC ROBERT, Linac Coherent Light Source — The X-ray Correlation Spectroscopy Instrument (XCS) is one of the four hard x-ray experimental station to be operated at the Linac Coherent Light Source, the world's first hard x-ray free electron laser. The XCS instrument is designed to take full advantage of the unique properties of the LCLS to probe dynamical phenomena in condensed matter systems down to nanometric lengthscales by means of X-ray Photon Correlation Spectroscopy. The XCS instrument will use the unprecedented coherence and flux properties of the LCLS. It will enable to probe both slow (i.e. with a characteristic time scales larger than 10ms) and ultrafast dynamics (i.e. ranging between hundreds of femtoseconds up to several nanoseconds) in various scattering geometries (SAXS, WAXS, Grazing Incidence). The ultrafast dynamics will use a novel Split and Delay technique. The design and status of XCS will be presented and the unique science enabling capabilities of XCS will be discussed.

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