

Soft condensed matter at FELs:

Structural Studies of Semiconducting Polymers

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Skin inspired electronics have applications for prosthetics, robotics and health monitoring. Such electronics must be elastic in addition to having high charge carrier mobilities. Polymer based semiconducting materials are promising candidates and the structural order on the short, medium and long range scale are key components for their electronic properties and elasticity. Structural studies of semiconducting polymer thin films at the nanofocus sample environment at the Coherent X-ray Imaging Instrument at LCLS show the emergence of order on the length scale of the beam size with annealing.