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Inprentus Receives Contract For a Diffraction Grating for the Shanghai Synchrotron Radiation Facility to be used in ARPES Studies

The Shanghai Institute of Applied Physics, Chinese Academy of Sciences has ordered a diffraction grating from Inprentus. This is the second in a series of orders received to supply the expansion of the new flagship synchrotron facility in China, the Shanghai Synchrotron Radiation Facility.

Champaign, Illinois, USA, August 6th, 2018: Inprentus has been awarded a contract by the Shanghai Institute of Applied Physics, Chinese Academy of Sciences. The contract will provide a mechanically ruled, blazed x-ray diffraction grating to the Shanghai Synchrotron Radiation Facility (SSRF). The Inprentus blazed diffraction grating will be used at the S2-Line beamline endstation of the synchrotron. This endstation houses cutting edge Nano-ARPES and Spin-ARPES experiments designed to resolve the properties (energy, momentum & spin) of photo-electrons emitted from metals, alloys and advanced ceramic materials. This diffraction grating order is part of a recent Phase II expansion of the SSRF. SSRF is an intermediate energy 3rd generation light source which is used by scientists and industry to conduct research in a broad range of fields, including physics, biology, chemistry, and environmental science, as well as medical and industrial applications.

Synchrotrons emit high-brilliance light by transversely accelerating or “wiggling” relativistic electrons, which are constantly circulating through the main storage ring of the facility. When a relativistic & charged particle is “wiggled” it loses energy through the emission of a photon; the creation of these photons in a controlled manner is the production of synchrotron light -- the essence of a synchrotron facility. Beamlines extend tangentially away from the storage ring and carry the freshly created synchrotron light to the experimental end-stations, where optical components such as mirrors, gratings, zone plates and lenses focus and direct the light onto the samples being studied. Inprentus mechanically ruled blazed diffraction gratings are used at synchrotrons around the world to provide scientists with the highest available resolution and efficiency when conducting their research in the soft x-ray wavelength range.

Ron van Os, CEO of Inprentus commented, “Inprentus is keenly focused on providing ultra high precision diffraction gratings to our customers and has a proven track record of improving efficiency and resolution of beamline applications. We are excited to again supply SSRF with a diffraction grating to support their research instrumentation.”

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Inprentus Inc.

Inprentus designs, manufactures and sells X-ray and EUV diffraction gratings for synchrotron radiation and free electron laser (FEL) facilities that are used for a variety of scientific and commercial applications by many Fortune 500 companies, academic institutions and government laboratories around the world. Inprentus was founded in June 2012 to commercialize an innovative, nano-scale lithography technology using mechanical deformation of metallic surfaces.