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Capabilities of the Brookhaven Linear Isotope production Facility for Irradiation Damage Studies

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BLIP's energetic proton beams can be used to explore the effects of radiation on novel materials under consideration for next generation nuclear reactors and high-power particle accelerators. By studying how proton irradiation affects materials (including different grades of beryllium and graphite, carbon fibers and silicon-carbon fiber composites, and super alloys and steels), and assessing the damage using the bright x-ray beams at Brookhaven Lab's National Synchrotron Light Source II, scientists can determine the crucial properties and ideal materials needed to withstand the extreme environments of next-generation reactors and accelerators. BLIP can also generate fluxes of fast neutrons for similar materials science studies relevant to the design of fusion and fast neutron reactors. Talk will highlight the capabilities available.

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