

Target Preparation for Nuclear Chemistry Experiments at Los Alamos National Laboratory

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Targets for nuclear chemistry experiments such as neutron-induced capture and fission require thin, uniform, and adherent deposits. Thin metal foils are often used as substrates and electrodeposition has been used to prepare actinide, lanthanide and transition metal deposits on these substrates. However, deposits on thin non-metallic substrates such as carbon foils or plastic films are desired for high-resolution fission-fragment spectroscopy. We have been exploring methods to prepare deposits on these substrates by electrodeposition or vacuum evaporation. We will discuss recent efforts in the preparation and characterization of targets by vacuum evaporation and electrodeposition. LA-UR-18-28293

Primary author: Dr BOND, Evelyn (Los Alamos National Laboratory)

Co-authors: Dr RUSEV, Gencho (Los Alamos National Laboratory); Dr BREDEWEG, Todd (Los Alamos National Laboratory); Dr ZHAO, Xinxin (Los Alamos National Laboratory)

Presenter: Dr BOND, Evelyn (Los Alamos National Laboratory)

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