

Dark field measurement setup for measuring spectra of Fano resonant strcutures. The scatterings of the Fano resonant structures at different alloy compositions were imaged using an inverted optical microscope (IX71, Olympus) with a 60x, NA 1.45, oil-immersion objective (PLAPON 60XO TIRFM, Olympus). The dark-field imaging was realized with a 45-degree glass plate with a circular mirror at the center, which reflected the incident light from a halogen lamp (grey columns) and transmitted the high-angle component of the back-scattered light from the sample (yellow columns). Once confirmed at the imaging CMOS camera, the same scattered signal was sent to a spectrometer (Shamrock SR-303i, Andor Technology), and the scattering spectrum for a single nanostructure was measured.