

Showcasing research from Professor Jae Sung Yoon's laboratory, Nano Lithography and Manufacturing Research Center, Korea Institute of Machinery and Materials (KIMM), Daejeon 34103, Korea.

Anti-counterfeiting labels of photonic crystals with versatile structural colors

Close-packed and non-close-packed monolayers of nanoparticles are integrated onto commercial tape to facilitate an overt-covert photonic crystal. The hidden label is revealed only under specific external triggers, such as attaching or removing a transparent cover film. This label is demonstrated in various anti-counterfeiting applications, including water-responsive labels and multi-layer authentication, which enhance the security level and versatility of this study.



