

세미나 요약 (Abstract)

강연제목 (Title)	Bi-anisotropic Metasurface for Spatial Separation of Harmonics		
강연자 (Speaker Name)	변강일 교수	일시 (Date)	2022.06.09. 16:00~18:00
<p>In this talk, first, we are going to explore basic properties and a design approach to the bi-anisotropic metasurface. Then, the design of a high-efficient metasurface based on bi-anisotropic properties is introduced for spatial separation of harmonics in the microwave/mmWave bands. The proposed metasurface is designed to refract normally incident plane waves toward 48.59°, 14.48°, and 0° for the fundamental mode, the third, and the fifth harmonics, respectively. The three-stacked-layer topology is adopted to design each unit cell, and the required sheet impedance of each layer is calculated to possess the bi-anisotropy. The required sheet impedance is then realized using 'I'-shaped patterns having different sizes and intervals for three different frequencies. The feasibility is demonstrated through fabrication and measurement, and the results show that the proposed metasurface can refract the harmonics to desired angles with the refraction efficiencies of 99%, 76%, and 72% at 10 GHz, 30 GHz, and 50 GHz, respectively.</p>			