Two-dimensional polaritons have emerged as powerful tools to manipulate light at atomic scales in materials such as graphene, transition metal dichalcogenides, and atomically-thin metal films. In this talk, we will review recent experimental advances in the fabrication and performance of atomically-thin metallic films, as well as fundamental properties of these excitations, including their in/out-coupling to light and their potential for applications in sensing, nonlinear optics, and quantum physics.