High frequency electromagnetic(EM) waves are increasingly being applied in industries because of saturation at lower frequency bands as a result of huge demand. However, electromagnetic interference (EMI) has become a serious problem, and as a result, high frequency EM absorbers are now being extensively studied. Also, recent developments in absorber technology have focused on producing absorbers that are thin, flexible, and strong. Hence, one-dimensional ferrous nano-materials are a potential research field, because of their interesting electronic and magnetic properties. Commercially, EM wave absorbing products are made of composites, which blend the insulating polymer with magnetic fillers. In particular, the shape of the magnetic fillers, such as flaky, acicular, or fibrous magnetic metal particles, rather than spherical, is essential for synthesizing thin and lightweight EM wave absorbers with higher permeability. High aspect ratio materials exhibit a higher permeability value and therefore better absorption of the EM wave, because of electromagnetic anisotropy. Nanowires are usually fabricated by drawing, template synthesis, phase separation, self-assembly, and electrospinning with a thermal treatment and reduction process. Producing nanowires by the electrospinning method involves a conventional sol-gel process that is simple, unique, and cost-effective. In this presentation, Magnetic nanowire and dielectric materials coated magnetic nanowire with a high aspect ratio were successfully synthesized through the electrospinning process with heat treatment and reduction. In addition to estimating the EM wave absorption ability of the synthesized magnetic and dielectric materials coated magnetic nanowire with a network analyzer, we investigated the possibility of using these nanowires as high-frequency EM wave absorbers. Furthermore, a wide variety of topics will be discussed such as the transparent conducting nanowire and semiconducting nanowire/tube with the electrospinning process.

**Keywords:** Nanowire, Nanotube, Electrospinning, EM Absorber