

## عنوان مقاله:

Microwave absorption properties of carbonyl iron and carbon nanoparticles filled epoxy resin coatings

## محل انتشار:

سومین همایش ملی تکنولوژی های نوین در شیمی، پتروشیمی و نانو ایران (سال: 1395)

تعداد صفحات اصل مقاله: 6

## نویسندگان:

,P Palmeh - MSc student of Materials Engineering, University of Tabriz

,A Kianvash - Professor of Materials Engineering, University of Tabriz

## خلاصه مقاله:

In this work carbon nanoparticle (CNP) was synthesized by an electrical arc discharge method. The electromagnetic (EM) absorbing coatings with different weight fractions of carbonyl iron (CI), CNPs and epoxy resin were prepared. As the weight fraction of CNPs in the composites increased to 1wt%, the minimum reflection loss reached to -9.7dB at 10.3 GHz with a matching thickness of 1mm. This research work concludes that hybrid EM absorbents, in the form of paints, consisting of nano-sized CNPs and micro-sized CI particles show excellent broad bandwidths of absorption. X-ray diffraction (XRD), Scanning electron microscopy (SEM) and Vector network analyzer (VNA) were used for determining structures, morphology and absorption properties, respectively

## کلمات کلیدی:

Absorbing materials; Carbon nano particles; Carbonyl iron; Composites

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/490841>

