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Authors: Bahram Ramezanzadeh, Ghasem Bahlakeh, Mohammad Ramezanzadeh



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Polyaniline-cerium oxide (PAni-CeO₂) coated graphene oxide for enhancement of epoxy coating corrosion protection performance on mild steel

Bahram Ramezanzadeh^{a1}, Ghasem Bahlakeh^{b**}, Mohammad Ramezanzadeh^a

^a Surface Coating and Corrosion Department, Institute for Color Science and Technology, Tehran, Iran

^b Department of Engineering and Technology, Golestan University, Aliabad Katool, Iran

¹ Corresponding authors:

*B.Ramezanzadeh (Assistant Professor), ramezanzadeh@aut.ac.ir, ramezanzadeh-bh@icrc.ac.ir

**G. Bahlakeh (Assistant Professor), Gh.Bahlakeh@gu.ac.ir

Highlights

- A high performance anti-corrosion system based on epoxy coating was fabricated
- Polyaniline (PAni) nanofibers-CeO₂ grafted graphene oxide nanosheets were synthesized through a Layer-by-Layer (L-b-L) assembly approach
- Both barrier and active corrosion inhibition properties of GO nanosheets were enhanced by deposition of PAni and CeO₂ compounds
- The DFT results evidenced the cation- π and electrostatic interactions between the cerium-polyaniline

Abstract: In this study the polyaniline (PAni) nanofibers-CeO₂ grafted graphene oxide nanosheets were synthesized through a Layer-by-Layer (L-b-L) assembly approach and characterized by Fourier transform infrared spectroscopy (FT-IR), X-ray photoelectron

¹ Corresponding authors:

*B.Ramezanzadeh (Assistant Professor), ramezanzadeh@aut.ac.ir, ramezanzadeh-bh@icrc.ac.ir

**G. Bahlakeh (Assistant Professor), Gh.Bahlakeh@gu.ac.ir

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