## عنوان مقاله:
Synthesis and mechanical properties of Bi۲O۳-Al۴Bi۲O۹ nanopowders

## محل انتشار:
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## خلاصه مقاله:
As a result of great surface area and a great number of energetic sites, ceramic nanocomposites are being considered as good adsorbents and catalysts. Al۲O۳ nanoparticles are widely used in high-tech applications owing to their excellent properties. Besides, Bi-based oxides have been the center of attention for applications such as remediation of hazardous wastes and wastewater photochemical degradation of organic contaminants and remediation of hazardous wastes. In this research, the synthesis of Bi۲O۳-Al۴Bi۲O۹ nanocomposite and its mechanical properties as a novel composition were investigated. The results showed that the prepared Bi۲O۳-Al۴Bi۲O۹ sample exhibited the Al۴Bi۲O۹ crystalline peaks. Additionally, the prepared nanocomposite showed no impurities. The mechanical properties of the Bi۲O۳-Al۴Bi۲O۹ sample were improved in comparison with Al۲O۳, Bi۲O۳, and Bi۲O۳- Al۲O۳, which offer it as a promising alternative to Bi۲O۳-Al۲O۳ composite ceramic.

## کلمات کلیدی:
Nanocomposite, Catalyst, Al۲O۳, Bi۲O۳-Al۴Bi۲O۹, Novel composition