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**A Review on nanoalloy Clusters: Theory to Applications**

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**Abstract**

Nanoalloy clusters have attracted a lot of attention in recent times and have grown enormously in various domains, ranging from semiconductor, material sciences, biophysics, life sciences to earth sciences. In this report, we presented a review of nanoalloy clusters and their application. The background of clusters, nanoalloys and their isomers, their classification, and potential applications ranging from catalysis, optoelectronics, magnetic to bio-diagnosis are reported. Experimental techniques as well as the importance of theoretical and computational studies in nanoalloy clusters are also presented.

**Keywords:**

[Nanoalloy clusters](https://www.eurekaselect.com/search/aws_search.php?searchvalue=Nanoalloy%20clusters), [optical properties](https://www.eurekaselect.com/search/aws_search.php?searchvalue=%20optical%20properties), [electronic properties](https://www.eurekaselect.com/search/aws_search.php?searchvalue=%20electronic%20properties), [magnetic properties](https://www.eurekaselect.com/search/aws_search.php?searchvalue=%20magnetic%20properties), [catalysis](https://www.eurekaselect.com/search/aws_search.php?searchvalue=%20catalysis), [bio-diagnostics.](https://www.eurekaselect.com/search/aws_search.php?searchvalue=%20bio-diagnostics.)

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