



Assessment of multifunctional activity of graphene oxide and guar gum-based nanomaterials against *Aedes aegypti*

Laishram Saya^{a,b,c}, Roopa Rani Samal^{d,e}, Sarita Kumar^e, Manisha Verma^f,
W. Rameshwor Singh^{b,*}, Sunita Hooda^{c,*}

^a Department of Chemistry, Sri Venkateswara College (University of Delhi), Dhaula Kuan, New Delhi, 110021, India

^b Department of Chemistry, Manipur University, Canchipur, Imphal, 795003, Manipur, India

^c Polymer Research Laboratory, Department of Chemistry, Acharya Narendra Dev College (University of Delhi), Govindpuri, Kalkaji, New Delhi, 110019, India

^d Department of Zoology, Dyal Singh College (University of Delhi), New Delhi, 110003, India

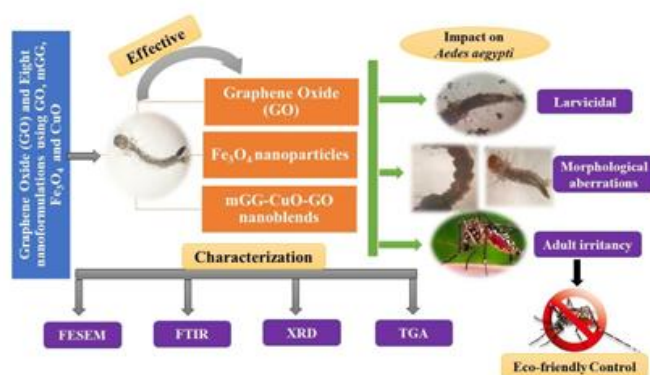
^e Insect Pest and Vector Laboratory, Department of Zoology, Acharya Narendra Dev College, (University of Delhi), Govindpuri, Kalkaji, New Delhi, 110019, India

^f Department of Physics, Acharya Narendra Dev College (University of Delhi), Govindpuri, Kalkaji, New Delhi, 110019, India

HIGHLIGHTS

- Graphene oxide & guar gum-based nanomaterials were assessed against *Ae. aegypti*.
- The nanomaterials showed dose-dependent larvicidal and adult irritant activity.
- Magnetic guar gum-CuO-Graphene oxide was found as the most efficient nanomaterial.
- Study shows possible use of these nanomaterials for *Ae. aegypti* management.

GRAPHICAL ABSTRACT



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ABSTRACT

Nanomaterials have been receiving much research attention in controlling insect pests and vectors. Properties, such as small surface-to-volume ratio, low dosages, durability, solubility, enhanced target activity, pore size and surface characteristics have enabled the design of precise and targeted insecticides through adsorption, encapsulation and conjugation. The reported study aims to evaluate the efficacy of graphene oxide (GO) and guar gum