

Green photosensitisers for the degradation of selected pesticides of high risk in most susceptible food: A safer approach

ABSTRACT

Graphene, a remarkable material, is ideal for numerous applications due to its thin and lightweight design. The synthesis of high-quality graphene in a cost-effective and environmentally friendly manner continues to be a significant challenge. Chemical reduction is considered the most advantageous method for preparing reduced graphene oxide (rGO). However, this process necessitates the use of toxic and harmful substances, which can have a detrimental effect on the environment and human health. Thus, to accomplish the objective, the green synthesis principle has prompted researchers worldwide to develop a simple method for the green reduction of graphene oxide (GO), which is readily accessible, sustainable, economical, renewable, and environmentally friendly. For example, the use of natural materials such as plants is generally considered safe. Furthermore, plants contain reducing and capping agents. The current review focuses on the discovery and application of rGO synthesis using extracts from different plant parts. The review aims to aid current and future researchers in searching for a novel plant extract that acts as a reductant in the green synthesis of rGO, as well as its potential application in a variety of industries.

Keyword: Green synthesis; Plant extract; Reduced graphene oxide; Applications; Graphene oxide