

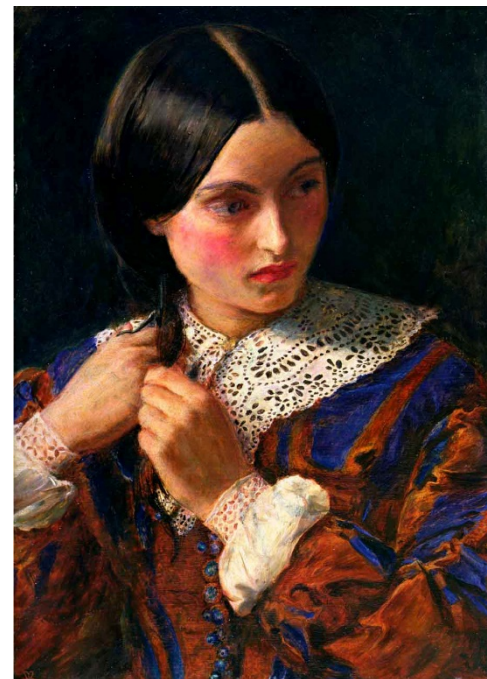
## Healthier hair in just 10 minutes with graphene dye

Read the full article at [rsc.li/2q4l23m](https://rsc.li/2q4l23m)

Most hair dyes contain dangerous substances such as anilines, phenols or ammonia. Some of these are toxic, can damage the hair, or cause an allergic reaction.

Carbon, in the form of graphene, does not have any of these dangers, and has the added advantages of cooling down quicker and not building up electrical charge. Graphene can be used to dye blonde hair darker, according to researchers from the US and China.

The dye is applied as 2  $\mu\text{m}$ -thick sheets of transparent graphene oxide mixed with vitamin C. The graphene oxide reduces to black graphene when the hair is blow-dried.



*Only a lock of hair* by John Everett Millais, 1858  
Manchester City Galleries

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1. State and explain three things you could do in order to use a dangerous hair dye as safely as possible.
2. Describe what the word 'toxic' means, giving another example of a toxic substance. Compare your definition with someone else's and decide which is best.
3. What is the relationship between carbon and graphene?
4. Design an advert for this new hair dye. Include a product name and reasons why someone should buy it.