Graphene protects paintings from fading

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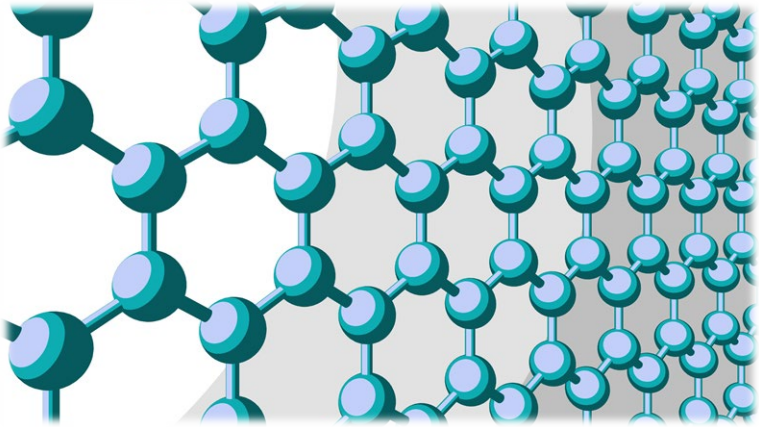
A transparent layer of graphene, just a few atoms thick, can prevent pigments in paintings from fading by up to 70%. Graphene absorbs a considerable amount of ultraviolet light, depending on the number of layers, and is a very good barrier against oxygen and moisture. It prevents colour fading by simultaneously reducing harmful radiation and by delaying the diffusion of oxidising agents.

Atomically-thin graphene lattices are applied onto adhesive film. Two rollers gently press the painting and the film together, and then remove the film, leaving only the graphene layer.



Graphene's hexagonal lattice

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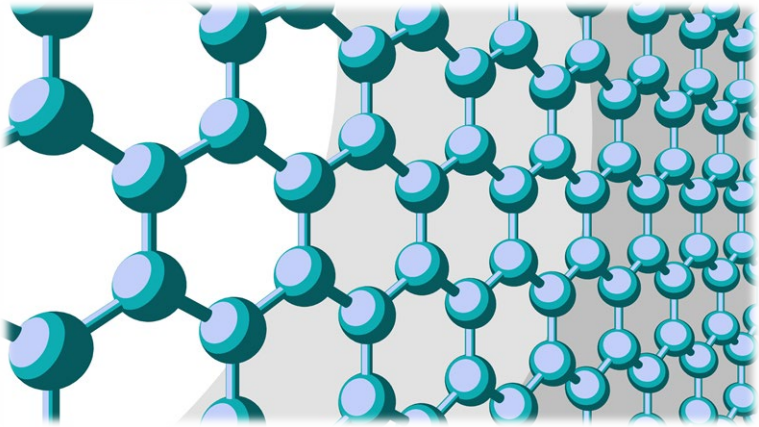

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1. What chemical element is graphene?
2. Describe the structure of graphene.
3. Suggest why the graphene veil is transparent.