Worksheet 4.5

Film chemistry

Emma takes a photograph of a friend. She is using her film camera rather than a digital camera.



Her friend tells her that the film is coated with silver bromide, which is sensitive to light.

Silver bromide can be made by reacting silver nitrate with sodium bromide. The chemical reaction can be represented as:

$$Ag^{\scriptscriptstyle +}(aq) + Br^{\scriptscriptstyle -}(aq) \to AgBr(s)$$

1	a	What type of chemical reaction is this? There are several different terms that can be used; give each with a brief explanation.
	b	What do you see happen to silver bromide in the light?
	c	Give another reaction that is affected by light energy.

2	a	What type of particle is Br ⁻ ?
	b	Is silver bromide soluble in water?
3	a	Suggest what would happen if a sample of silver iodide were left in the light.
	b	Silver iodide can be made in a similar way to silver bromide. Write an ionic equation, including state symbols, to show this reaction.