

Answer on Question #79960, Chemistry/ Organic Chemistry

A solvent for an insoluble chloride

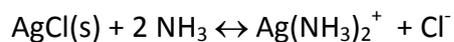
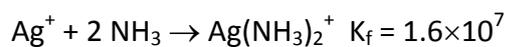
Solution

Precipitates like AgCl, AgBr are insoluble in water but are soluble in other solvents like NH₃ due to the process of forming complex ions.

For example: examine solubility of AgCl in ammonia



Formation of complex ion:



$$K_{\text{net}} = K_{\text{sp}} \times K_{\text{f}} = 2.9 \times 10^{-3}$$

$K_{\text{net}} > K_{\text{sp}}$ implies that AgCl is more soluble in aqueous NH₃ than in water.

Answer: ammonia NH₃

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