



ESDY 13.4.2014 "Crystals"

<http://esdy.milset.org>



Diana's tree

You need:

- Distilled or de-ionized water
- Silver nitrate AgNO₃
- Copper filaments, without insulating (gum or paints)

Proceedings:

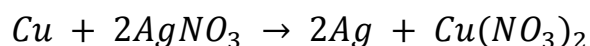
Solubilize 0.5 g of silver nitrate in 100 cl of water, when the salt is all solubilized, put some filaments of naked copper inside the solution.

Copper will become the branches of our tree, pure silver will deposit on the strings looking alike needle leaves.



Why does it happen?

This is the chemical reaction:



Copper has a more intense chemical activity than silver.

That's a substitution reaction, copper nitrate does not appear because it stays in the solution.

CAUTION: Silver nitrate is poisonous, basic and stains of black skin and clothes. So you have to be really careful. Don't use tap water to solubilize it because the chlorine inside can form silver and chlorine salts, which precipitate in water.