

[gilding - a hands on approach](#) by Ailitha de Ainwyk (Angela Nelk)

Greetings friends of the illumination trade, I have written down how I gild most of my work! Feel free to comment and tell your gilding techniques...I'm curious!!!

Note: this is basically the class I taught at University in Lübeck!

The medieval illuminator knew of at least two ways to gild a book page. He could use Gold leaf or Shell gold.

Gold leaf is gold that has been hammered to a thin sheet no more than 1/8000 mm to 1/10,000 mm in thickness, put on a piece of paper, to handle it easier. It is so thin that one can cut it with scissors and if you breath to hard, the gold can be blown away.

Shell gold consists of very small pieces of Gold leaf that have been ground to a fine powder and then bound together with a binder (i.e. water and Gum arabic).

A large difference between the two is their shine. Both gold leaf and shell gold can be polished by using a burnisher but shell gold, unlike gold leaf cannot usually polished to a mirror like shine.

The following descriptions will deal with the process of gilding using Gold leaf. It is a hands on approach, starting with the required materials, a recipe for a non gesso ground and a description on how to lay the Gold leaf on the paper.

Materials:

For the non gesso ground you will need Gum arabic (a white powder derived from a plant extract used as a binder in most paints, some foods and many medications), which can be bought in a drugstore, (in Germany in an Apotheke, see picture: white container with red lid), super fine natural cane sugar (use a dry container to store it, like a spice holder, see picture: glass container with green lid), distilled water and mortar with pestle. For the application of the gilding ground use a good brush. To measure the ingredients for it you can use a teaspoon. My suggestion: use the smallest spoon you can get, like the ones which are served with ice cream in fast food restaurants. Experience showed me that you need very small amounts of the gilding ground to gild a scroll and a small spoon helps being the most efficient with your materials!



For the gilding you need Gold leaf. There you have the option to buy it in little booklets where the gold sticks to glassine paper (see picture: violet booklet with Gold leaf page on top) or to buy a booklet with loose Gold leaf. My suggestion: buy the booklet where the

gold sticks to the glassine paper, even if it might be a bit more expensive (the booklet with the gold on the glassine paper is called patent gold). The brush next to the Gold leaf in the picture is a fan brush. I use it to brush the little pieces of gold away, which don't stick to the gesso. Another very important tool is the burnisher, to polish the gold. In the picture you see a professional burnisher that can be bought in an art store like "Boesner". The most important part of this tool is the agate stone. If you do not want to spend about 40EUR, you can also use a very smooth and round agate stone, like the orange/red one in the picture. Be careful not to touch the stone with uncovered hands as the body oil on your hands will be a problem, it can cause the gold to adhere to the stone not the gilding ground / gesso. Mistress Bridget's suggestion: You can clean oil from the burnisher with rubbing alcohol. You will also need a straw and scissors to cut the Gold leaf into handy pieces.



The gilding ground:

You need 4 parts (i.e. teaspoon) distilled water, 1 part gummi arabicum and 1 part super fine cane sugar and if you want to, a drop of red watercolour.

Before you fill the 4 parts of water in the mortar, please make sure it is clean and dry or the gilding ground will be spoiled. Now fill the 4 parts of distilled water in the mortar and add 1 part gum arabic. Use the pestle to stir it. Be patient, it might take some time until the gum arabic is dissolved. Also pay attention, as the gum arabic will change from white powder to a sticky gum like transparent lump. If that is the case, use the pestle to dissolve it.

Now you add 1 part super fine cane sugar. Sometimes the sugar has enough brown colour to make the gesso visible on the paper. If not, use a drop of red watercolour/gouache. Stir the gesso with the pestle until the sugar has dissolved. Now the gesso is done. Before you use it, you can fill it into a small container. It is possible to store the gesso in the refrigerator for about a week. Unfortunately the sugar will spoil the gesso after a while and it will mould. Mistress Bridget's suggestion: Mould can be prevented by adding a VERY tiny amount of oil of cloves to the mix- I rub a little on the lid of the container I use to store the gilding ground in.

My suggestion: there are two possibilities to get super fine cane sugar (if you cannot buy it super fine), either you use the mortar and the pestle or (which is much faster) use one of these great kitchen machines (blender) that cuts everything to powder!

Applying the gilding ground

When you apply the gilding ground to the parts of the scroll/paper you want to illuminate with gold, use a good brush. Do not take too much of it on the brush, so

nothing drops on the paper or goes outside the parts you want to illuminate. Now brush the gilding ground on the paper in a way that every part has the same amount of it. Now let it dry for about 5 to 10 min, depending on the size of the area you want to illuminate. Then apply the next layer of gilding ground. You will need two to three layers of it to get a three dimensional look! When you think you are done, let the gilding ground dry for at least 24 hours.

Problems that might occur:

1. Bubbles: can already occur when you mix the gilding ground. If you apply these bubbles on the paper, they will dry and when you apply the gold they will burst. Then you have little holes which cannot be covered with gold. These bubbles can also occur when you brush the gilding ground on the paper to fast.

My suggestion:

1. If you have bubbles in your gilding ground, let it sit for 1 to 24 hours. They will burst by themselves. Take your time to apply the gilding ground, do not rush and if you brush bubbles on the paper brush over them again, either the bubble will stay in the brush or burst. If this also does not help you can use a needle with a very pointy top to burst them.

2. gilding ground on the wrong area: If you applied the gilding ground to the wrong area you have two options. Either you paint over it, using white gouache for the white areas or the colour you want to illuminate this area with, or you use a scalpel. With a scalpel you can actually scratch/cut the gilding ground off the paper. But you will need a very sharp scalpel and a very calm hand to do it.

My suggestion: If you applied the gilding ground to an area you will later illuminate with another colour, paint over it. But if you applied it to a white area try to scratch it off.

Applying the Gold leaf:

Before you start cut your Gold leaf into handy pieces. My suggestion: cut the page with the Gold leaf into half and then cut stripes about 1-1,5cm wide, as an example look at the picture. Now that your Gesso dried for at least 24 hours it is not sticky anymore. To activate it you need to blow on it. The moisture in your breath is enough to activate the Gesso. To have some control over the activation of the gilding ground I use a straw, see picture. Now put the straw aside and take the burnisher/agate stone. Lay the piece of old leaf you have in your other hand on the activated gilding ground, the gold facing the gilding ground and lightly stroke over the paper.





The gold should stick now to the gilding ground! Now repeat this step again until no gold can be applied to the gilding ground anymore. How many layers of Gold you need depends on the amount of gilding ground you put on the paper and how humid the air is. Now you stroke lightly with your burnisher over the Gold. This way the layers of Gold will melt together and the Gold becomes shiny.



You should stop to burnish it, when the gold gets so shiny that you could use it almost as a mirror. Finally use the fan brush to brush the gold peaces away that do not stick to the gilding ground, see last picture! Now one part of your scroll/paper should be illuminated by Gold.



Problems that might occur:

1. The gilding ground doesn't work: there could be two reasons why it doesn't work. First it didn't work right from the beginning

or second it is too dry. In the first case you have to do the scroll again, there is nothing that could activate the gilding ground. (This never happened to me, so I think the recipe is fairly good.) In the second case you can use a tiny drop of water and let it sit until the gilding ground takes it in and then try to apply the Gold. Another possibility is to use a wet cloth (like a tissue) and dip it on the gilding ground until you feel it becoming sticky, and then apply the Gold.

2. You rub off the Gold: this happens if you use too much pressure to burnish the Gold or the gilding ground dried again. In both cases blow on the gilding ground again (even if there is Gold on it), this way activate it again and apply as much Gold as needed. Use less pressure to burnish it.

While gilding is beautiful it is not the only way to decorate or illuminate a scroll. It is just one of many techniques. I hope you will enjoy it!!!