Creating texture using metal leaf

When I was a little boy living in Japan, my parents took me to the famous Toshogu shrine at Nikko. As we walked around, gazing up at the amazingly beautiful structures, my mother kept saying, “look at all the gold leaf!” Well, I looked and looked, but to my seven-year-old eyes the leaves sure looked green. That was my introduction to the magical world of gold and metal leaf, and my fascination with those transformative materials has only grown.

The use of gold leaf for decorative purposes can be traced back as far as the third millennium BC and, in all the centuries since, there does not seem to be a civilisation or culture that has not been fascinated with gold leaf’s ability to transform otherwise mediocre objects into ones of great beauty and seductive desirability. In walking through any museum, one sees gold leaf enhancing primitive ceremonial objects, as well as gracing picture frames and furniture from all periods of art. From viewing the treasures in the King Tut exhibit, to reading about the mythical Golden City of Eldorado, to my adolescent fixation with the Golden Girl in Goldfinger, gold has always bewitched me. I am thrilled and gratified that it has become such an integral component of my work.

Continuing with his series on applying texture, Michael Scarborough looks at the process of applying metal leaf to your turnings.

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About the author: Growing up in Japan influenced Michael’s turning style, which he describes as ‘Japanese-inspired art’. He works with a broad range of materials and techniques and spent 25 years as a classical singer.

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As a wood and lacquer artist, I use a lot of gold leaf in my work. Many times it serves as an accent on a bowl rim or on the feet of a footed bowl. Increasingly, I am using it to line the interiors of bowls, and, in some cases, such as with the ‘Wakasa nuri bowl’, which is inspired by Japanese lacquerware, I am seeking a re-interpretation of the look of an antique Japanese screen. I have also been experimenting with lining formal tea caddies with crushed leaf, as you can see below. In some cases, just the simple addition of one area of gold leaf can heighten the visual appeal of an entire piece, such as in the ‘Golden Eye’ bowl where a knot hole was filled and gilded.

**EXAMPLES OF USING GOLD LEAF**

The basics: What is Metal leaf?

For starters, and for the sake of simplicity in this article, I will refer to gold leaf and its less luxurious cousins, such as composition leaf, copper leaf, aluminium leaf, etc., simply as metal leaf.

We are all familiar with the term ‘gold leaf’, but many may not be exactly sure what it is. Gold leaf is indeed real gold, ranging roughly between 22 and 24 carats. One of gold’s magical properties is its ability to be beaten into almost microscopically thin sheets, measured in the millionths of inches. A sheet of real gold leaf is usually about 75 × 75mm square, mildly translucent, and very expensive, considering the price of an ounce of gold these days. Thus, I won’t be asking you to handle real gold leaf – at least not for this particular project.

The great impersonator of real gold leaf is ‘imitation gold leaf’, also known as ‘composition leaf’ or ‘Dutch metal’. It comes in larger sheets, about 150 x 150mm, is thicker than real gold leaf and can be handled with the fingers. Most importantly, it is a fraction of the cost of real gold leaf. That is what we’ll be using.

**GOLD LEAF & WOODTURNING: MIXING OIL & WATER?**

I think it is safe to say that most woodturners are not interested in using metal leaf on their turned pieces. Indeed, most want nothing more than a clear finish. But, it is my hope that my recent series of articles on decorative finishes has piqued the interest of and encouraged readers to stretch their creative muscles – to live outside the box, if you will – even if only for one project. Rather than starting out with one of the decorative paint finishes I described in the previous three articles, perhaps some readers would prefer to try their hand at a simple, metal leaf project instead. Hopefully this article will go on to inspire you.

**THE BASICS: THE PROCESS**

What we are basically doing is covering an object with the leaf to make the object appear to be made of solid gold.

The process is broken down into four steps:
1. Preparation of the surface
2. Applying the adhesive
3. Applying the leaf
4. Sealing the leaf.

For the purposes of this explanatory article, I will turn a small plate and finish only the wide rim with leaf. I will use maple (Acer Saccharum), as I do for the bulk of my painted pieces, as it gives me a crisp edge and lacks pores, which would need filling.

If you wish to follow along, creating a piece of your own using these steps, I suggest you turn a piece that has simple, somewhat wide areas upon which you can easily lay the leaf – 25–38mm. Go for a well-defined edge between the flat rim and the curved inner portion of the workpiece. This will aid greatly in defining a clean line between the gilded areas and the natural areas of wood.

**Surface preparation**

As I mentioned in my recent article about the copper-leafed candlesticks – see issue 263 – preparation of the surface is critical.
THE BASICS: THE PROCESS (CONT.)

Any blemish on the surface will show through the thin leaf and will, in fact, become magnified once the sealer or finish is applied to it. Were this a piece destined for a collector, I'd go all out to get a glass-smooth surface – using pore filler and sanding to 12,000 grit – before I began leafing. For the purposes of this demonstration article, however, we will take it all in a more relaxed manner.

Once the piece is turned, I power sand it to 320 grit and then give it a spray coat of clear shellac. I follow the directions on the can for allowing the shellac to dry properly; then sand the piece working up to 500 grit. As I get up into the higher grits, I use a backing pad during the sanding process. This preparation work allows me to begin the finishing process with a wonderfully smooth surface.

Applying the adhesive

Once the piece is smooth and blemish-free, I apply the adhesive that will hold the leaf in place. Most gilders refer to this adhesive as ‘size’, but some prefer to use the generic term ‘varnish’. There are many, many different types of size, each with its own particular attributes: water based versus oil based; pigmented; slow-set versus quick-set. The variety can be bewildering, but we will ‘stack’ with one type for this project: oil-based quick size.

Oil-based means just that – solvent-based to be cleaned up with mineral spirits. The word quick in the title refers to the time it takes to ‘come to tack’, as called for on the can. For the sake of ease – and to maintain low blood pressure during this project – we will use what is referred to as ‘patent leaf’, as opposed to loose pieces of leaf. Although patent leaf can be called by many different names, it is basically leaf that comes loosely attached to wax paper and is simple to use. It was my goal to keep this project as simple as you can. If you decide to try experimenting with this technique, I believe you will find that you can transform an otherwise ordinary looking piece into something with real sparkle.

1. Start by picking up the piece of leaf by its wax paper edge
2. Cut it to the size you want using a sharp pair of scissors
3. Lay the leaf in place
4. Using a cotton wool ball, rub over the wax paper gently but firmly to make the leaf adhere to the size
5. Lift the wax paper away
6. Proceed around the circumference of the piece until you have covered all the areas to be gilded
7. If there are areas where the leaf does not adhere, blow on them and the warmth and humidity of your breath will reactivate the size. If this does not work, repeat the sizing and laying process in those specific areas using a fine pointed brush to apply the size

Applying the leaf

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I then turn the lathe on again and float the tip of the brush, again parallel to the rim and as lightly as possible over the wet size. I think of this three-step process as knitting the size together, leaving no raised areas or ‘holidays’ – as my Dad would call them. This is a good process to use with any sort of brush-applied material. Any overruns can be carefully removed using a small piece of paper towel dampened with thinner.

When the length of time required for the size to ‘come to tack’ as called for on the can has been reached, I test the readiness, or level of tack, by employing the ‘snap test’. I place a knuckle on the surface and quickly pull it back off. If there’s an audible snap, the size is ready. If the surface is still noticeably damp, I wait until I can produce a good snap.

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The completed bowl

2. Lift the wax paper away
3. Enjoy the look of your real gold leaf! It’s a little bit of alchemy in your workshop.