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Embellishing, engraving materials using laser technology to create innovative surfaces for recycled and sustainable materials

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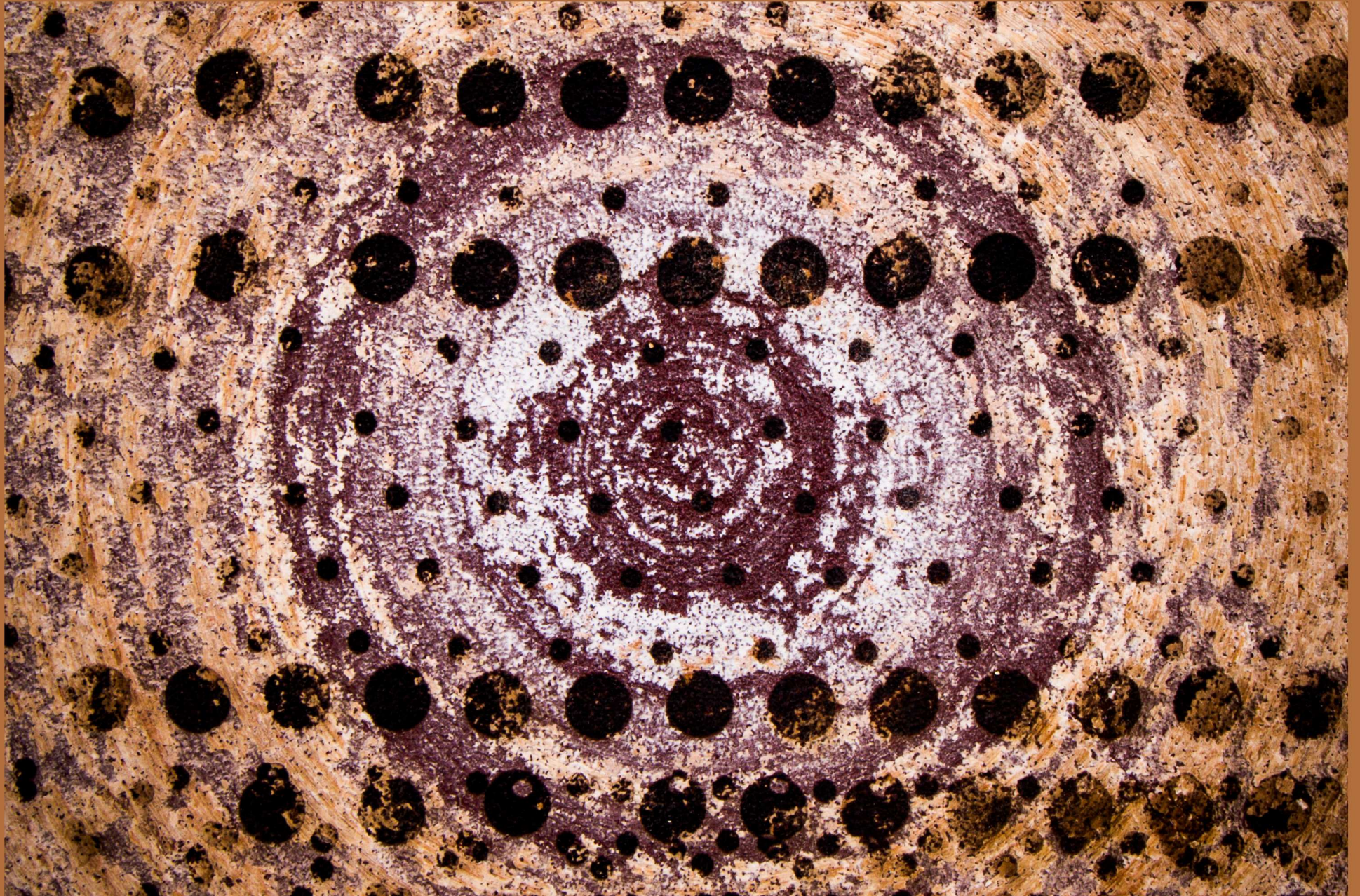
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*Embellishing, engraving materials using laser  
technology to creating innovative surfaces for recycled  
and sustainable materials*

Helen Ann Howells

September 2015





**Embellishing, engraving materials using laser  
technology to create innovative surfaces for recycled  
and sustainable materials.**

**Helen Ann Howells**

A photo reference book submitted to the University of Huddersfield in partial  
fulfilment of the requirements for the degree of Masters of Research.

September 2015





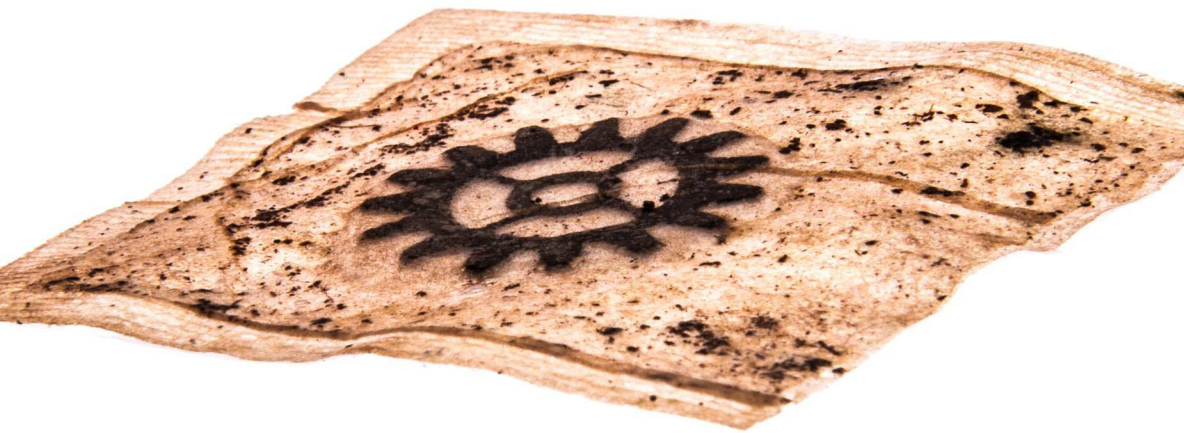


## **Figure 1**

**Myers, Daniel**

**(2013)**

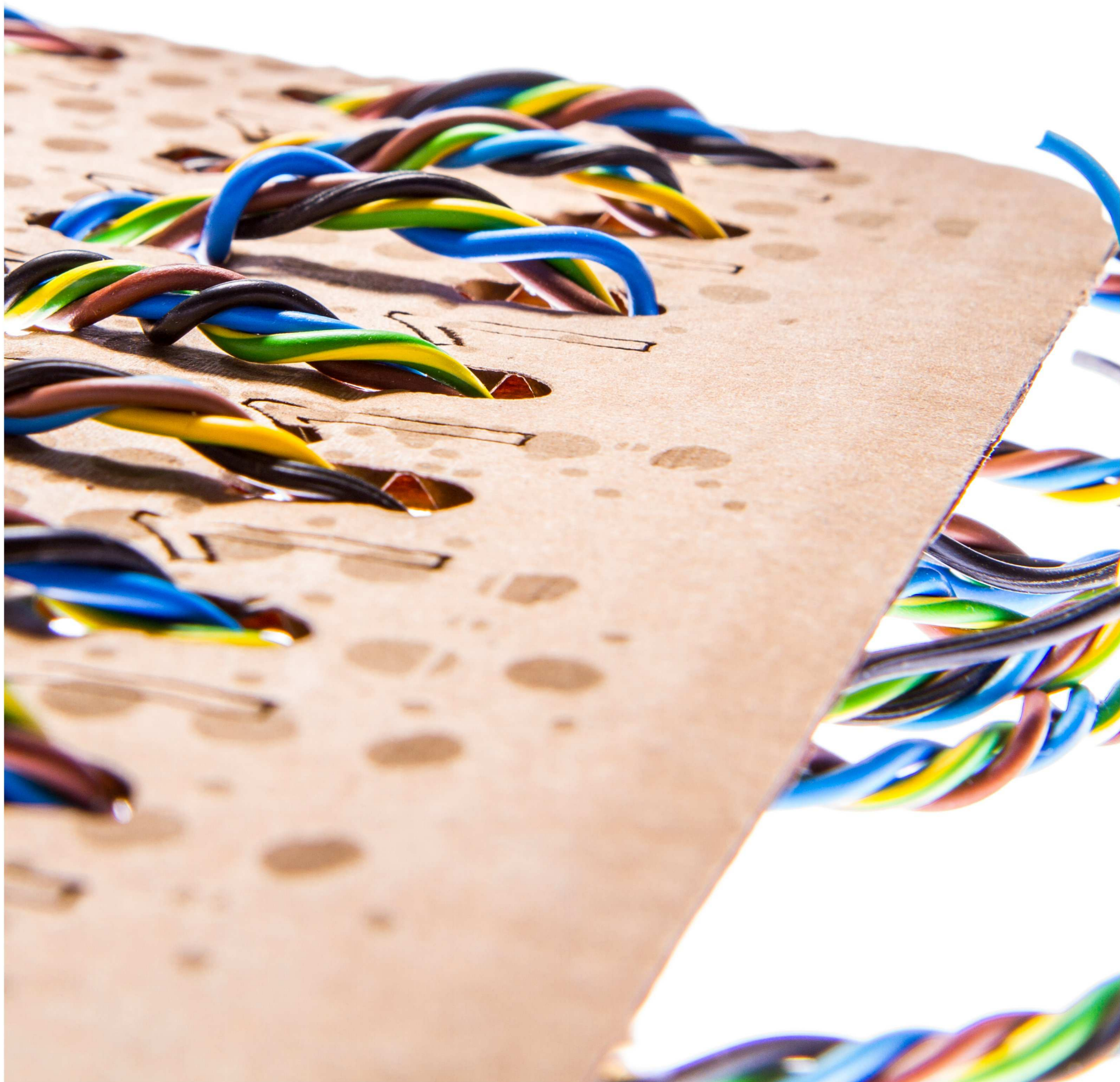
***Cog trapped in T-bag.***



Laser cut card made of recycled materials trapped between two layers of a dried out Tea-bag.

PVA glue used as a bonding agent.









**Figure 2**

**Myers, Daniel.**

**(2013)**

***Technology meets recycling.***

Laser etched and cut recycled thin cardboard from an old packaging box found on its way to landfill.

Surface etched with geometric shapes of various sizes.

Laser cut 'Binary code', with zero being burnt through and number one partially burnt through the layers.

Discarded electrical cables striped and twisted then weaved through the zero to add embellishment to sample.







**Figure 3.**

**Myers, Daniel.**

**(2013)**

***Corrigated box.***



Triple layered laser etched recycled corrugated cardboard box that was originally used as packaging.

Top design has different sized geometric shapes. The laser passed over the second time to etch ontop of the previously etched circles.

The design background adds texture to the main surface of the cardboard.









## **Figure 4**

**Myers, Daniel.**

**(2013)**

***Revolution cog meets technology revolution.***

Laser etched mount board bought at an art shop as cut offs from picture framing. Laser etched the surface with large images of cogs.

Semi cuts through layers of the mountboard illustrating numbers.

Total burn through on zero with nylon fishing cord usually used for netting twined together and woven through cut out areas.









**Figure 5**

**Myers, Daniel.**

**(2013)**

***Recycled woven and etched grey card.***

Recycled grey card from industry originally used to separate steel plates.

Strips of the card was woven and bonded together with a PVA solution.

Images of 'Cogs', were etched over the surface. laser semi cut through second layer image using the same design from a different starting position.









**Figure 6**

**Myers, Daniel.**

**(2013)**

***Velvet top mountboard.***

Laser etched 'Dots', showing card beneath velvet fabric.

Laser cut geometric shapes with plaited electrical wire threaded through to add embellishment.









**Figure 7**

**Myers, Daniel.**

**(2013)**

***Red Velvet mechanical cog etched  
mountboard.***

Design reversed to a negative image and large areas of velvet burnt away with laser leaving a devoré effect on the surface.









**Figure 8**

**Myers, Daniel.**

**(2013)**

***Laser etched geometric pattern on industrial sanding paper.***

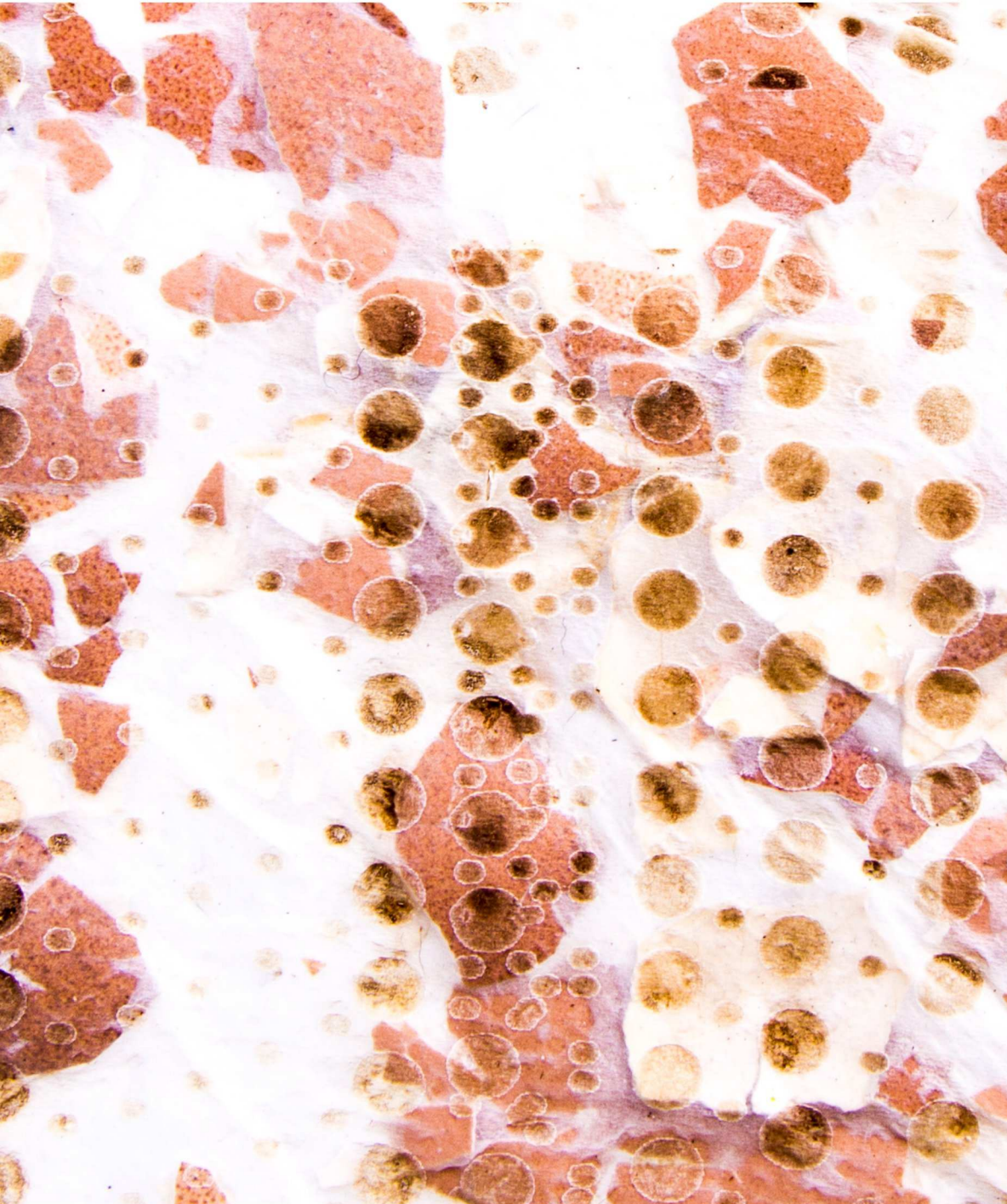
Heavy duty Industrial sandpaper used on a sanding disc machine. Paper has residue of wood impregnated into the textured paper.

The laser etched a simple geometric design of dots of varying sizes over the natural design of the sanded paper and wood residue.









**Figure 9**

**Myers, Daniel.**

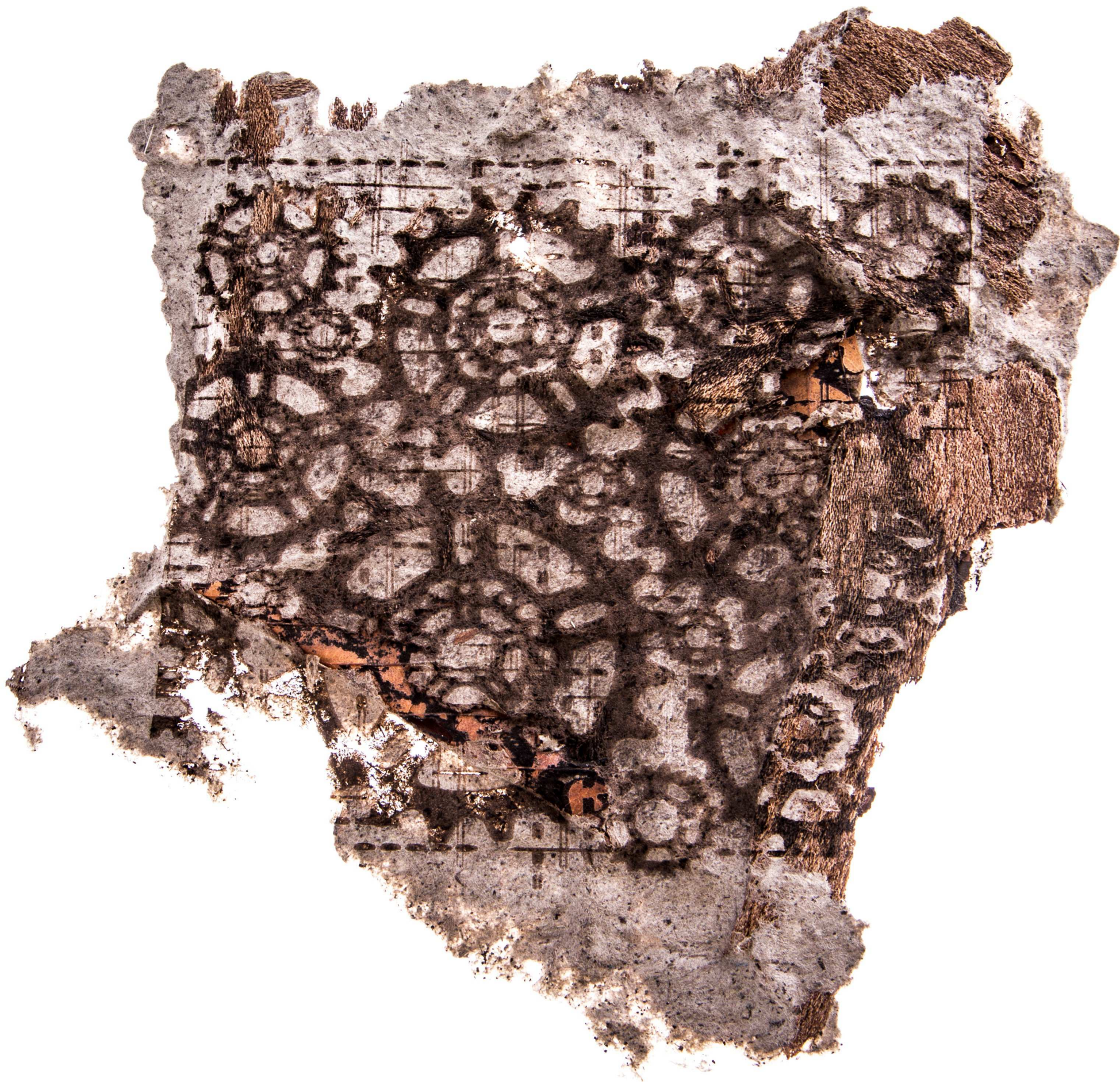
**(2013)**

***Organic shell trapped and bonded in white kitchen paper.***

Layered paper sized and bonded with PVA solution. Crushed chicken egg shell in beige colour trapped between two layers of cheap white kitchen roll.

'Dot' design laser etched on the uneven surface. Translucent and opaque with hues of browns from the shell and laser process.









**Figure 10**

**Myers, Daniel.**

**(2013)**

***Organic handmade paper.***

Hand-made paper made out of old newspaper, Autumn leaves and wood mixed with tea leaves and PVA solution.

Paper has uneven surface with leaves and wood visible in areas. Laser has further etched away at the surface and embellished leaves with fine raster design of Industrial cogs.









**Figure 11**

**Myers, Daniel.**

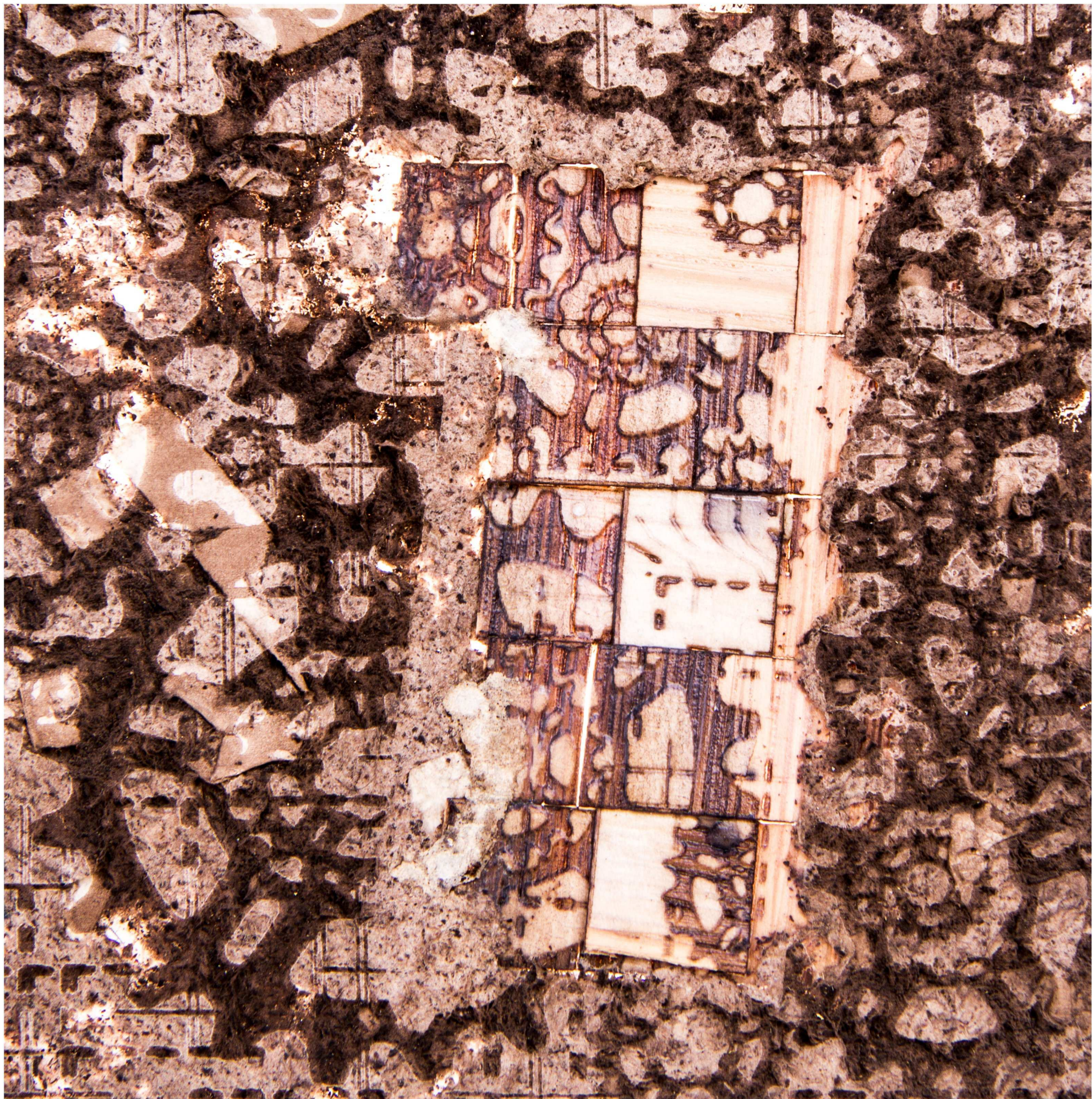
**(2013)**

***Gold cogs and Multi Coloured black  
mountboard.***

Black recycled mountboard from framing shop.

Laser engraved with 'Cogs' design and inks added to embellish design using a rubber roller.









**Figure 12**

**Myers, Daniel.**

**(2013)**

***Veneer trapped in handmade tissue paper.***

1970's veneer wood from a marquetry kit found in a charity shop.

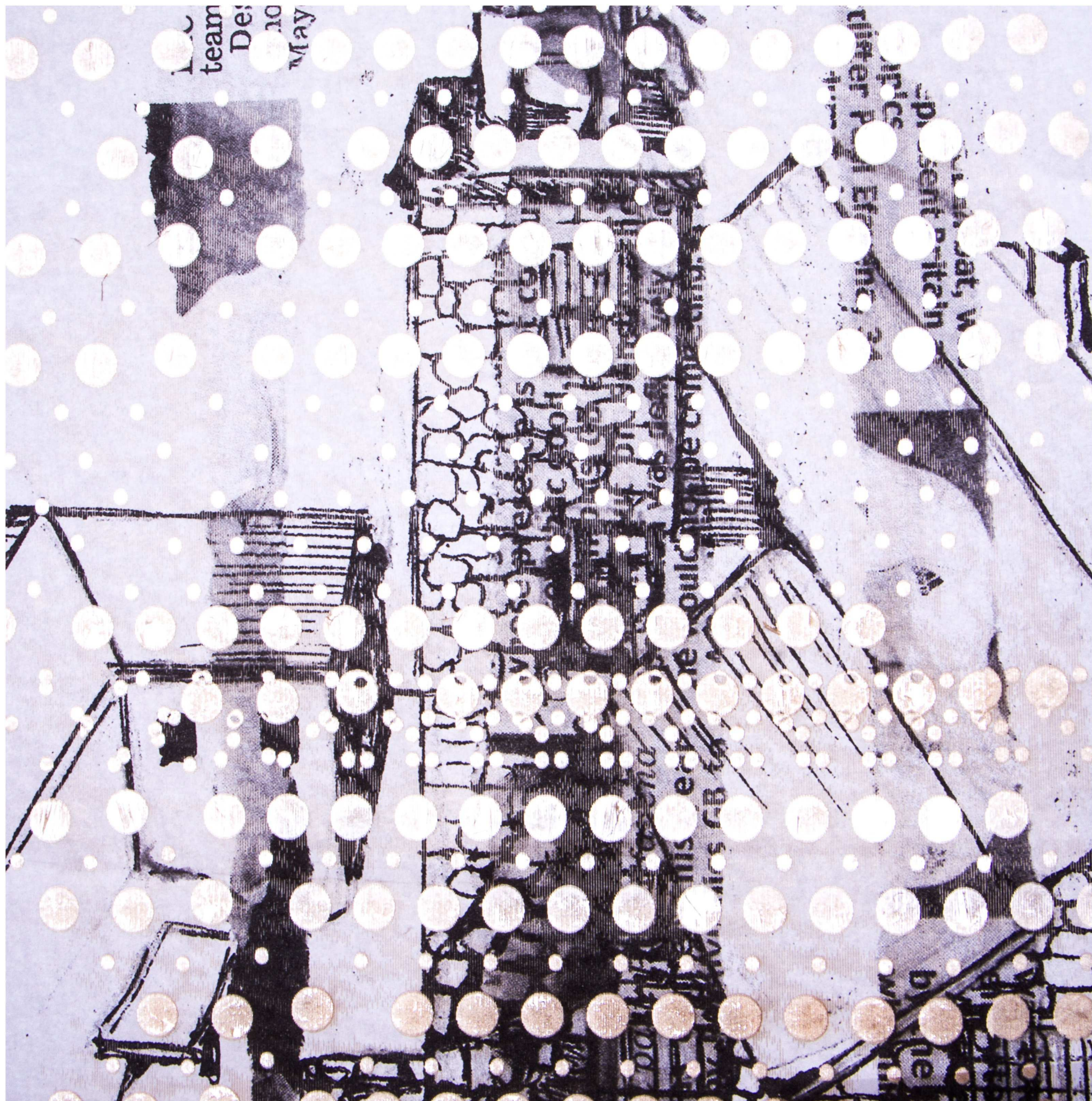
Handmade paper made out of toilet tissue, shredded white light weight printer paper, PVA solution and tea leaves.

Laser cut out tile with etched 'Cog' design on uneven surfaces.

Teak veneer pre-etched with 'Cog' design before being trapped in the paper.

Masked out teak veneer laser etched with large 'Cog' design to embellish the plain handmade paper.







**Figure 13**

**Myers, Daniel.**

**(2013)**

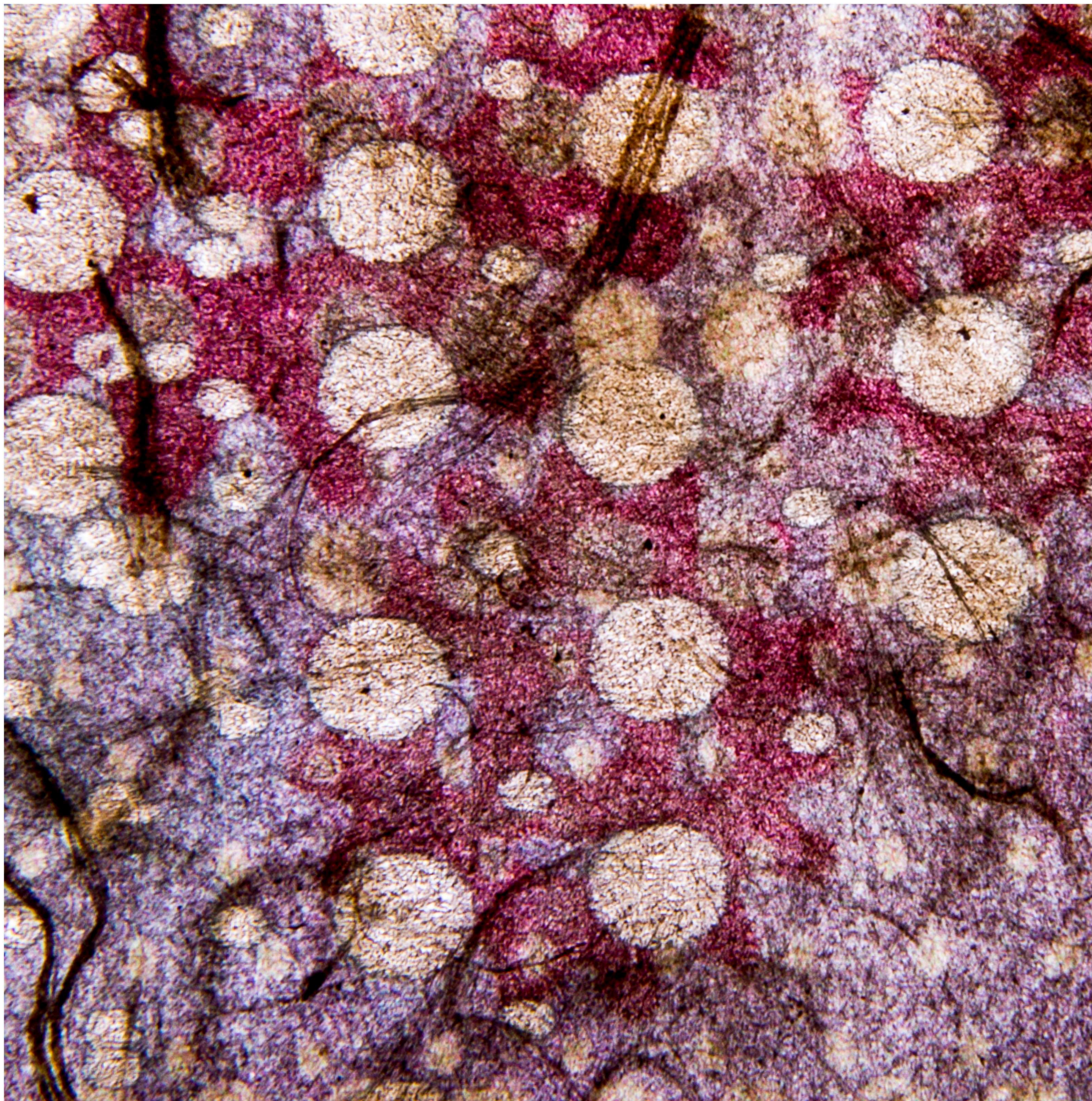
***Industrial Achitecture on light weight paper.***

Photocopied sketched drawing of Industrial Revolution Architecture on lightweight white paper using a laser printer.

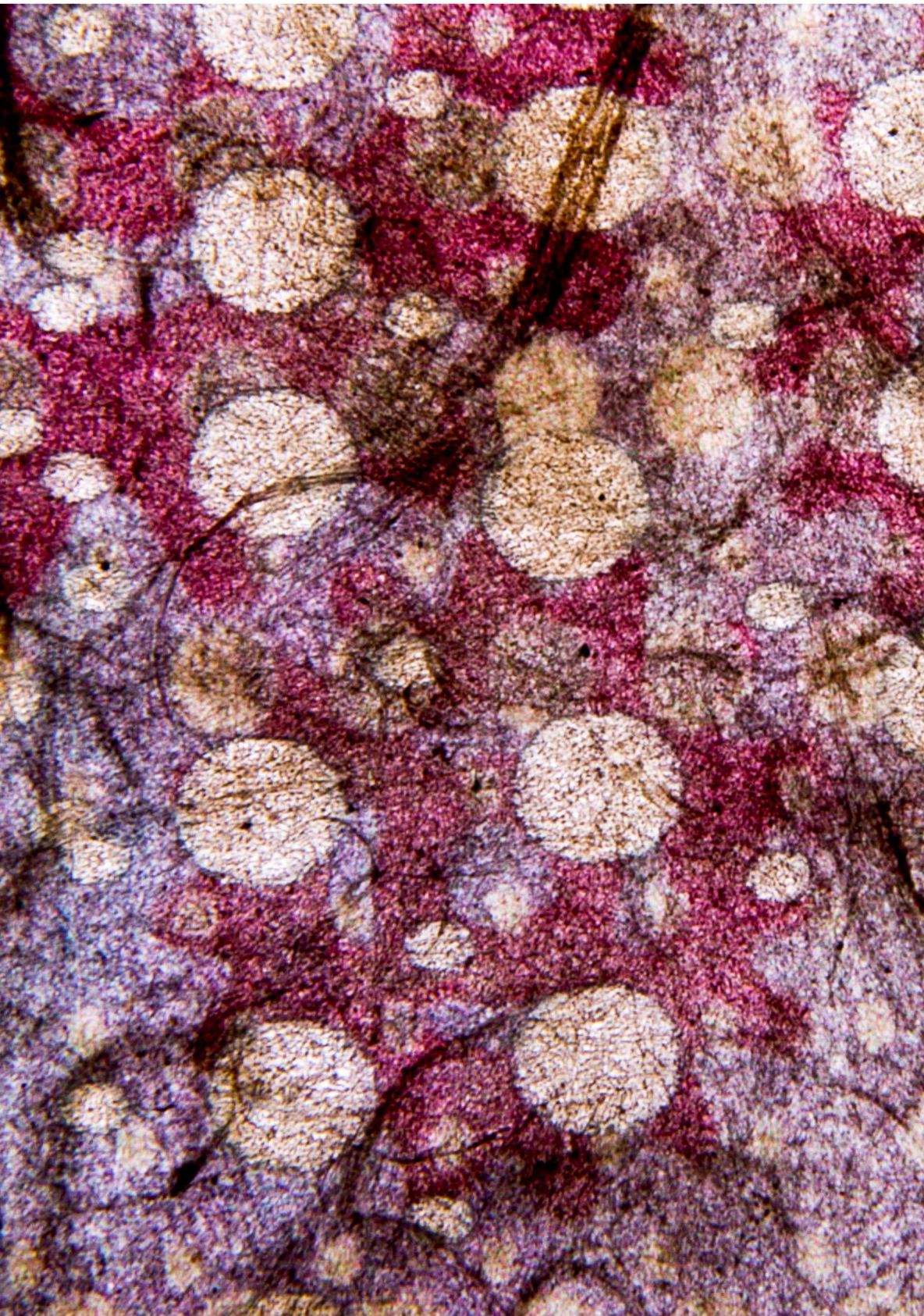
Laser etched over the thin paper with 'Dot' design.











**Figure 14**

**Myers, Daniel.**

**(2013)**

***Commercial handmade paper with ink jet print and laser etching.***

Ink jet printer 'Cogs' design added to commercially produced handmade paper for scrap booking.

Laser etched 'Dot' design over the 'Cogs', printed design.









**Figure 15**

**Myers, Daniel.**

**(2013)**

***Layered Block print etched and cut.***

Rollered base with poster paint and block printed design using laser engraved design of 'Cogs'.

Layers of tissue added and laser etched design and cut design added to the surface as embellishment.









**Figure 16**

**Myers, Daniel.**

**(2013)**

***Handmade paper with natural materials.***

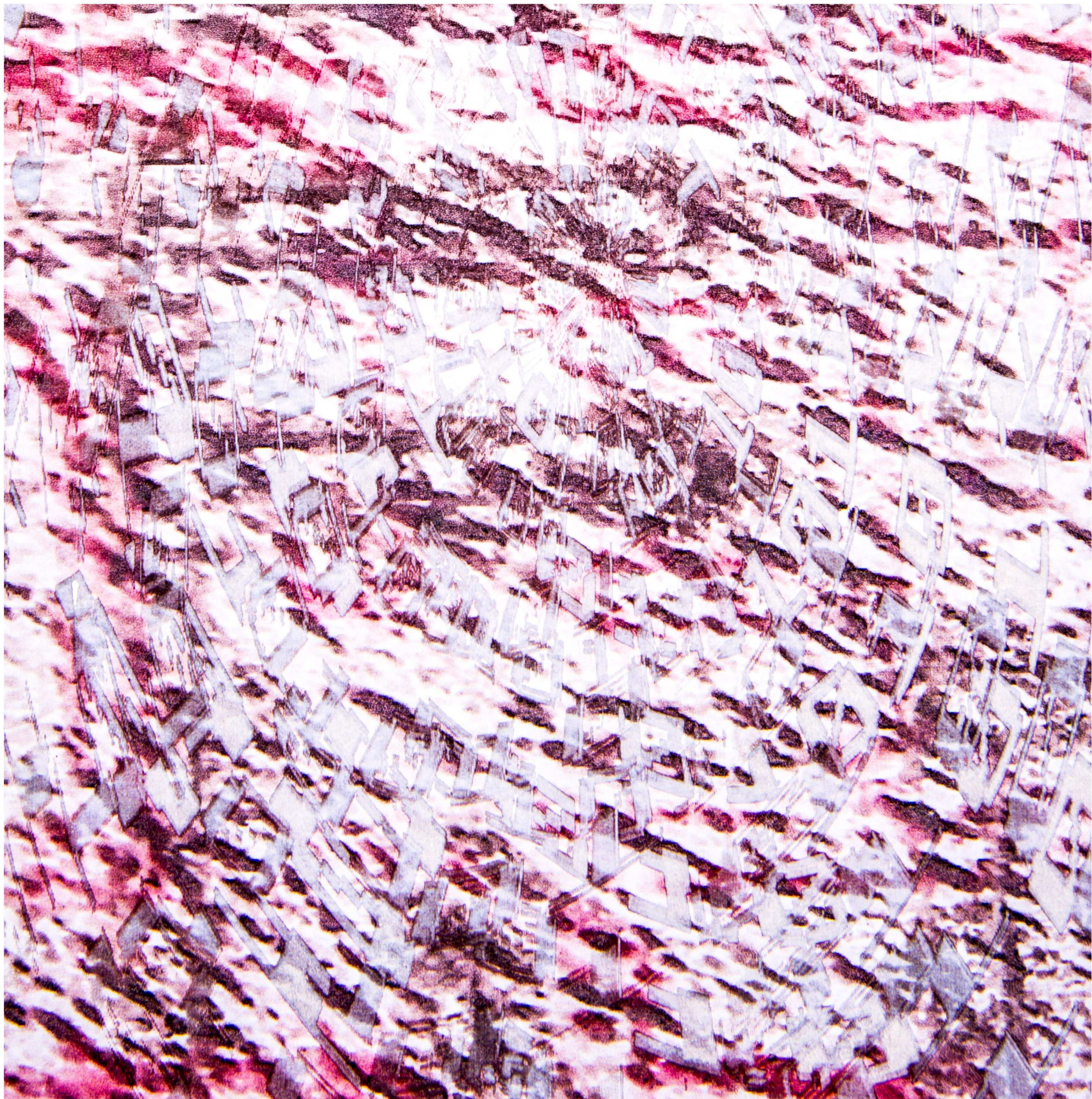
Paper made from mixture of papers e.g tea-bags, kitchen roll, toilet tissue, printer paper and old newspaper.

PVA solution with tea plus tea-leaves added bonding all materials together.

Leaves and bark trapped between layers of handmade paper.

Laser etched image of 'Cogs' over uneven surface.









**Figure 17**

**Myers, Daniel.**

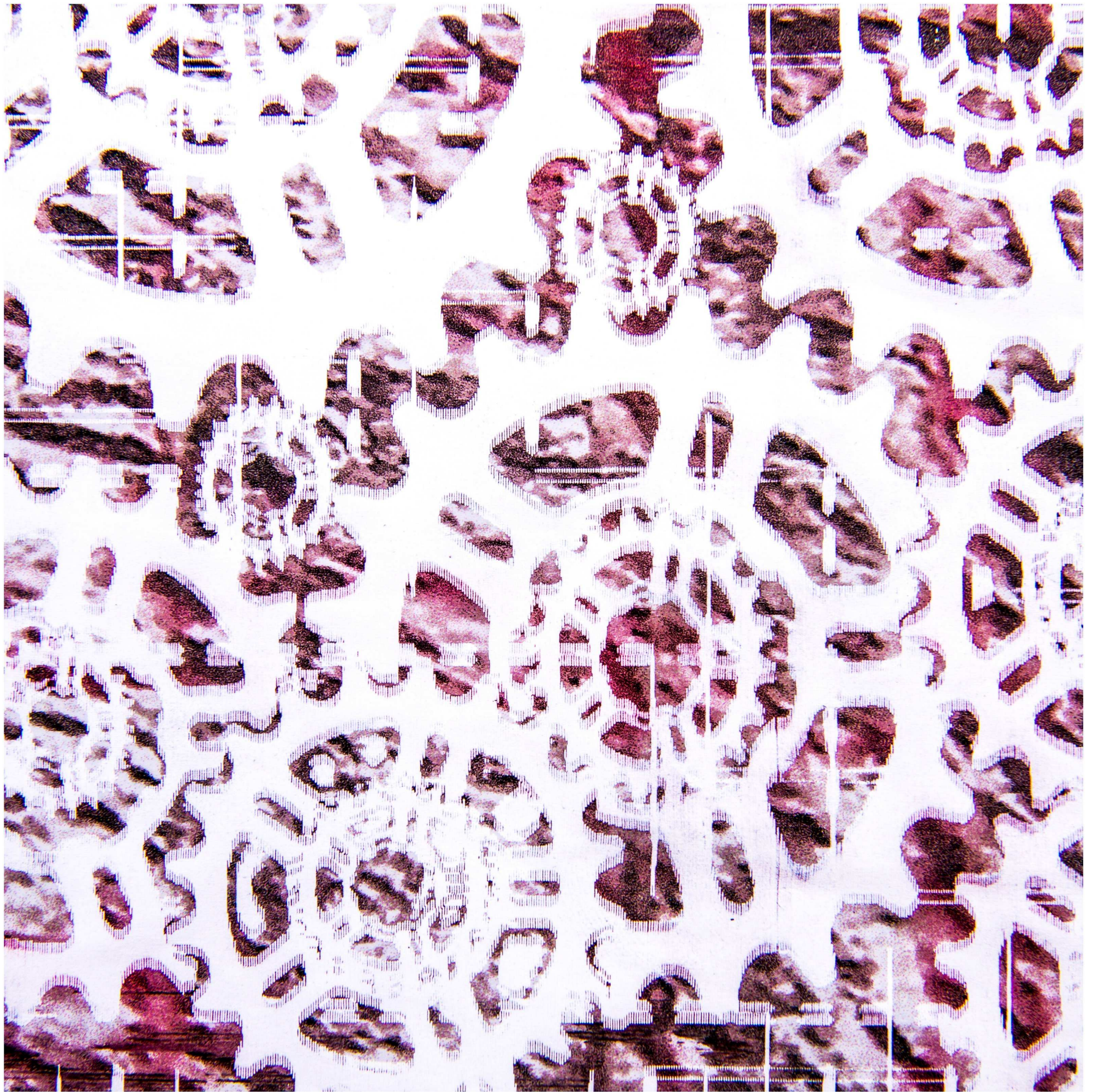
**(2013)**

***Laser printed tracing paper***

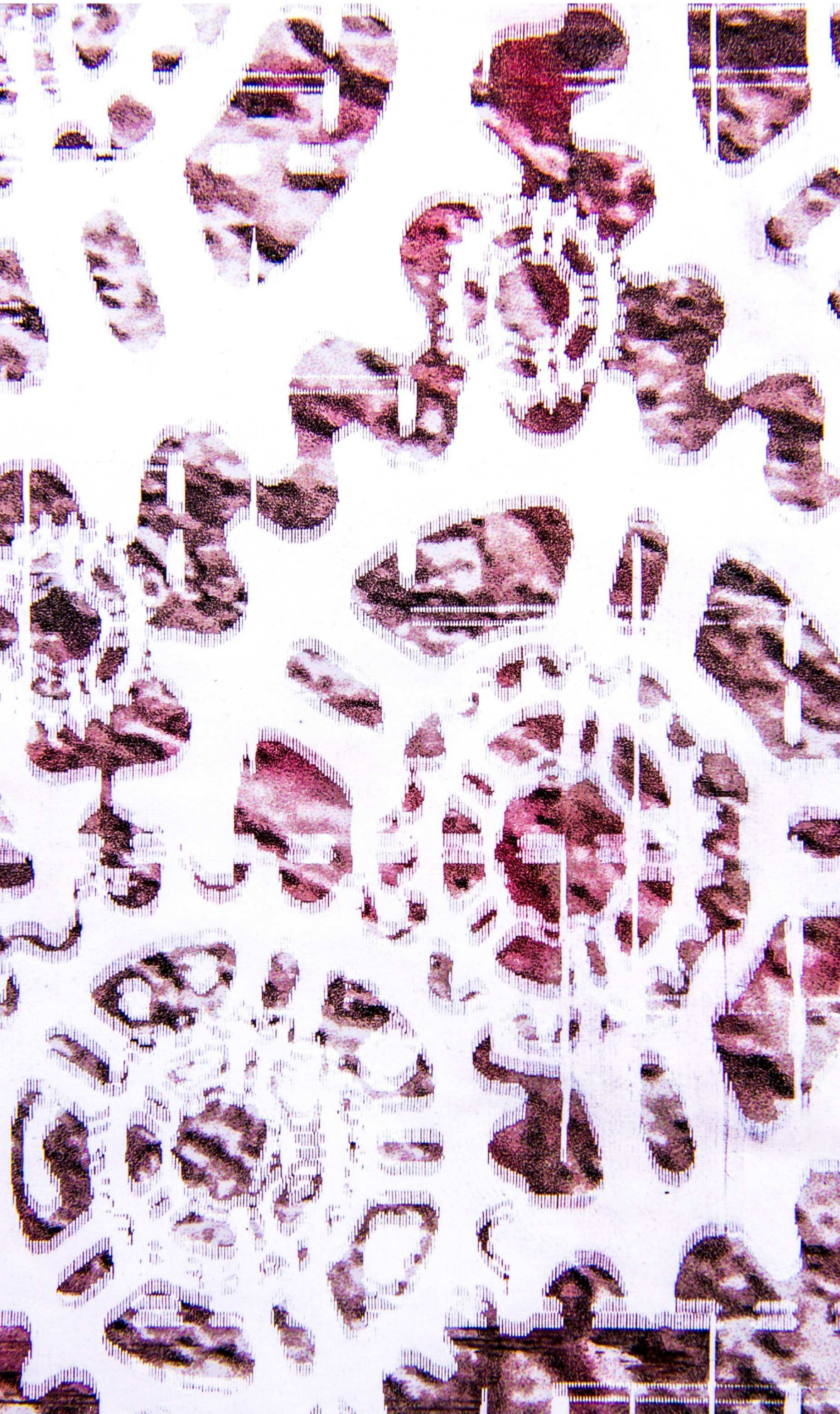
Laser printed tracing paper with design from a photocopied laser etched design.

Laser etched design over print is the 'Binary code in a vortex'.









**Figure 18**

**Myers, Daniel.**

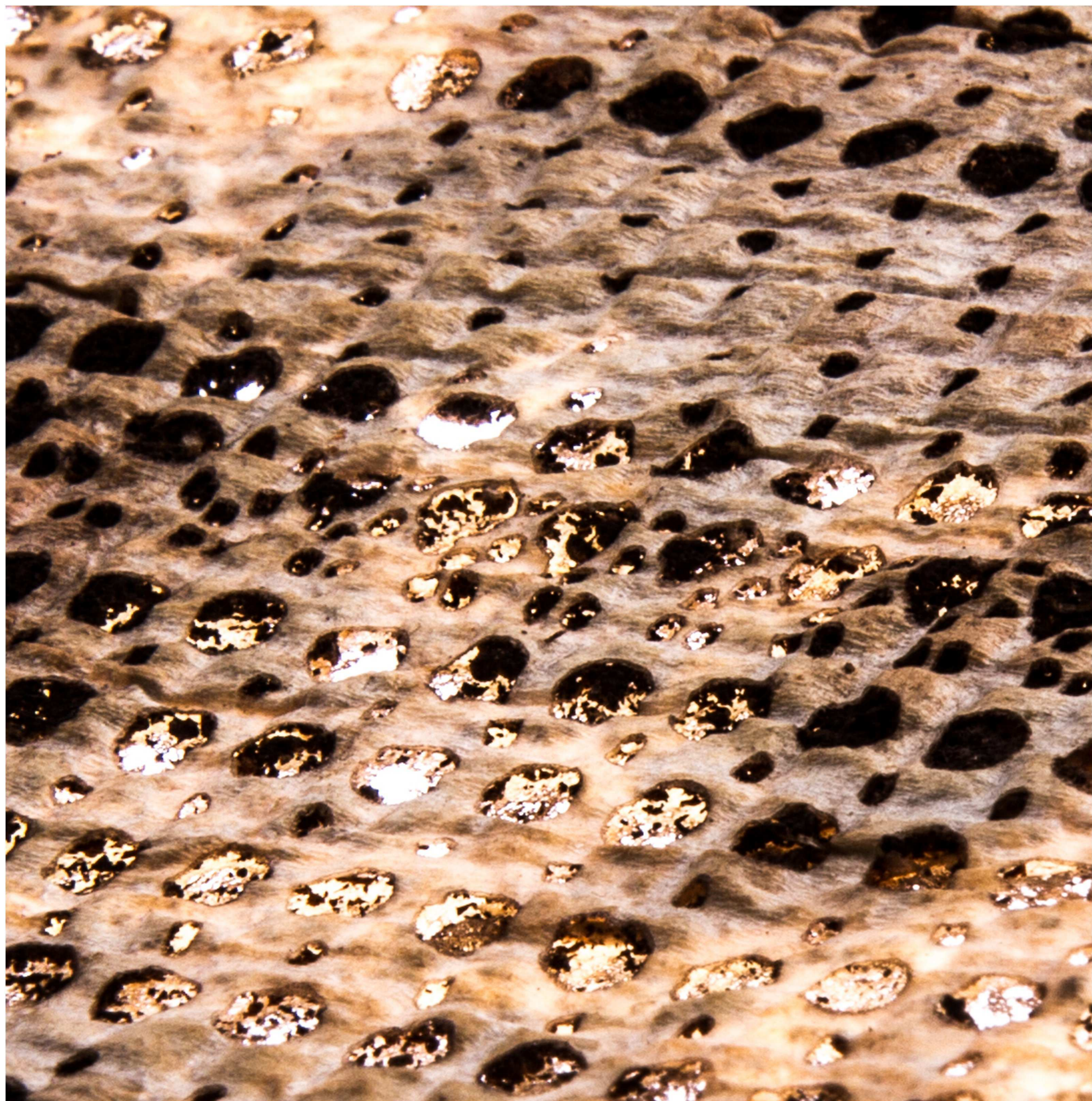
**(2013)**

***Translucent cogs.***

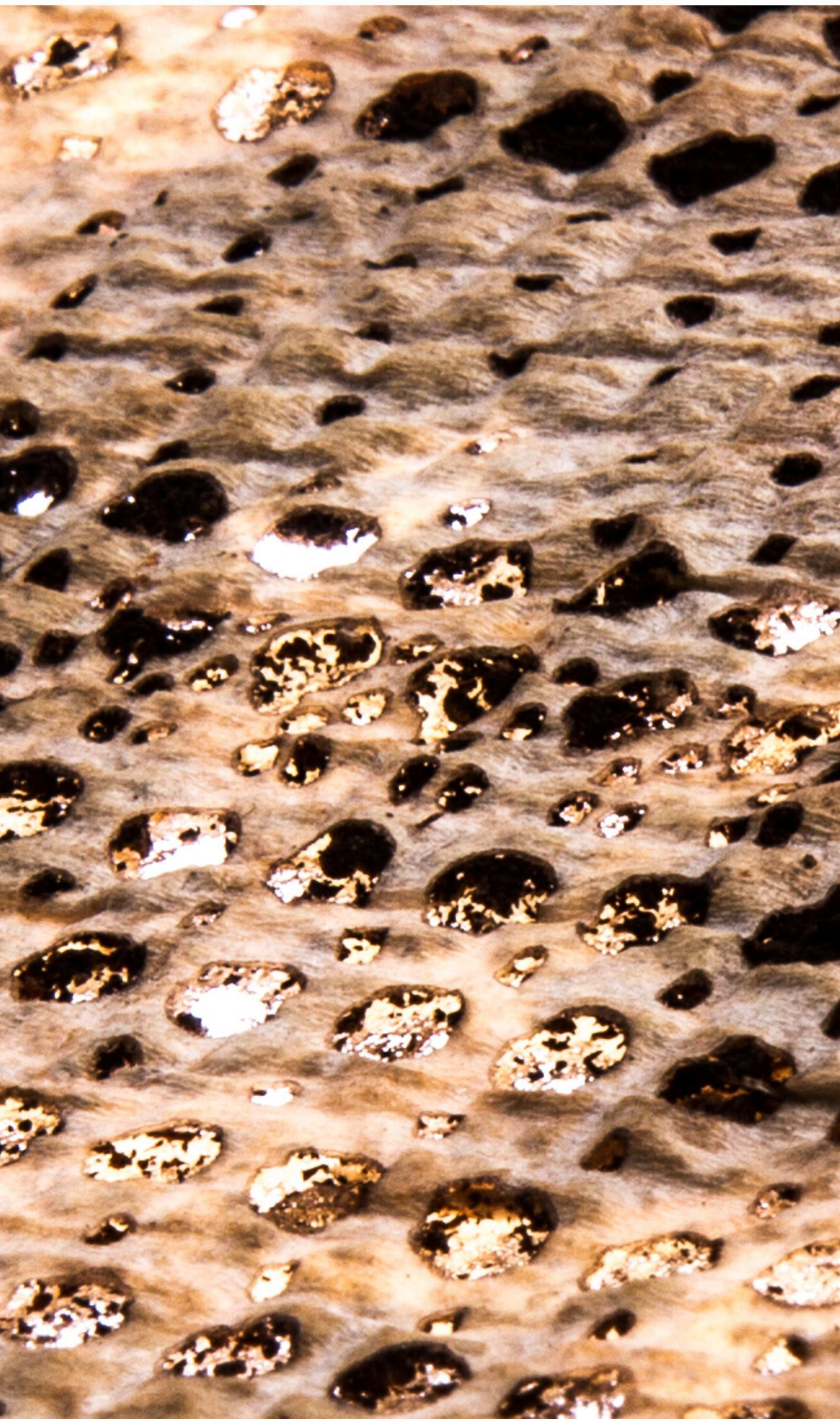
Laser printed background from a photocopied laser etched design.

Laser etched over printed background with 'Cogs' design.









**Figure 19**

**Myers, Daniel.**

**(2013)**

***Textured Handmade paper with fabric.***

Handmade paper with a mixture of papers e.g tea-bags, kitchen roll and old newspapers. PVA, water and tea solution used to size and bond paper over bondaweb material.

Laser engraved bondaweb at high power levels to reveal paper beneath with 'Dots' design.











