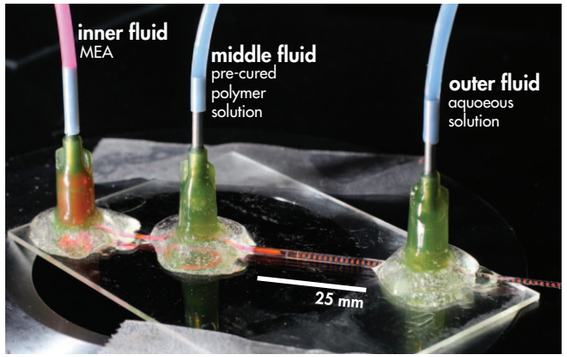
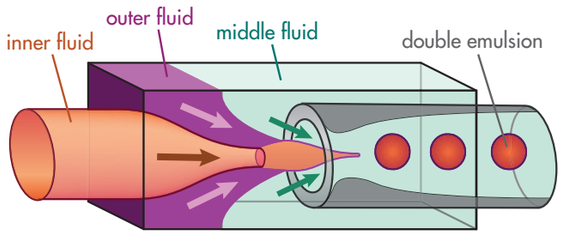
Photographs and Illustrations

Spreads for portfolio

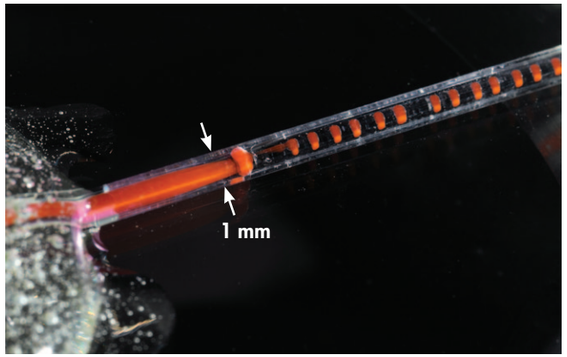
Steve Kranz
2013

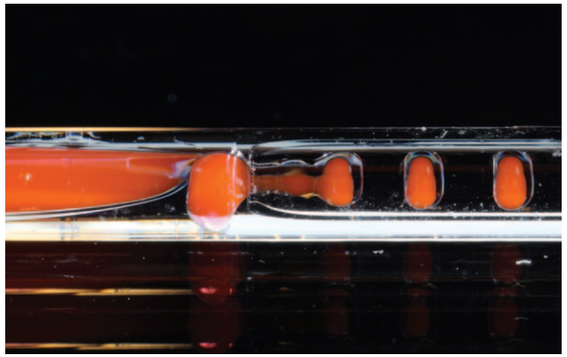
Microcapsules for carbon capture by John Vericella and Elizabeth Glogowski

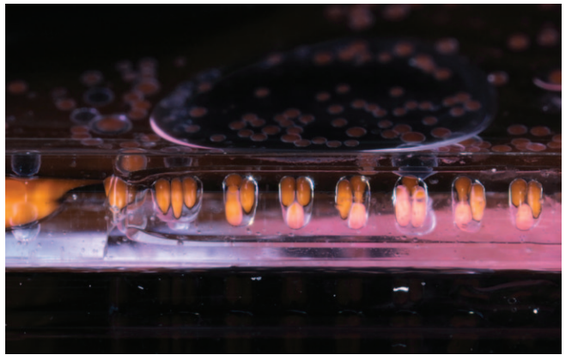


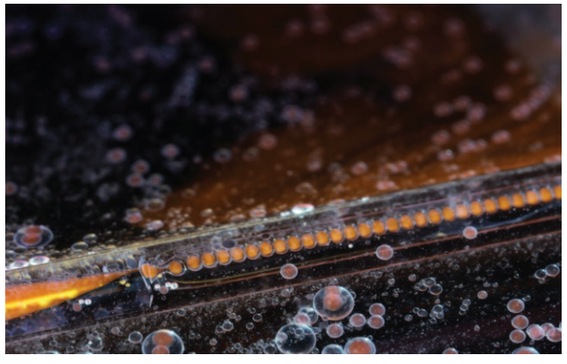


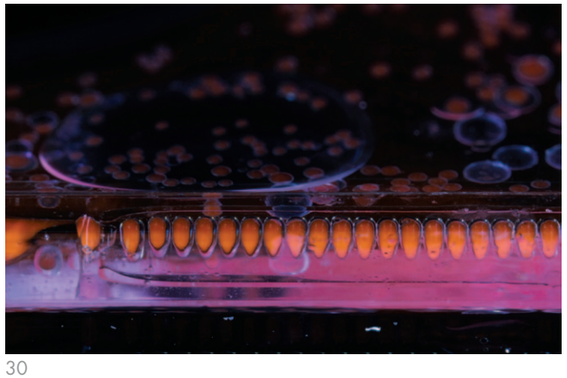
Redrawn from **Utada, et al.** *Science*, **308** (2005).

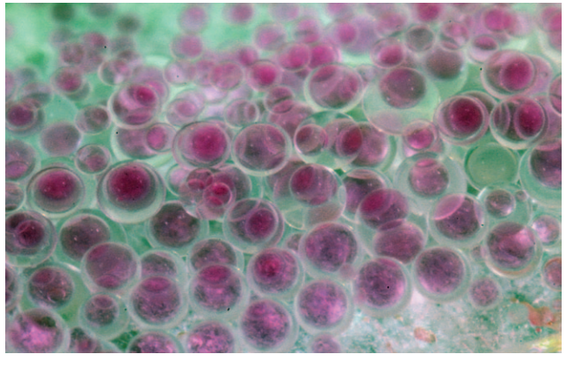




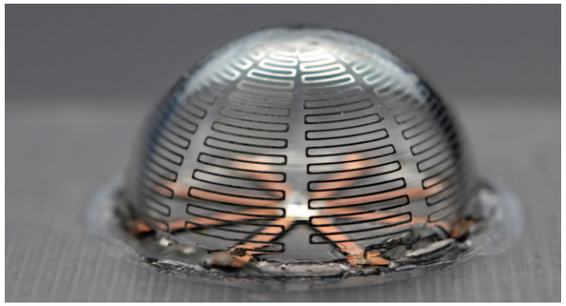


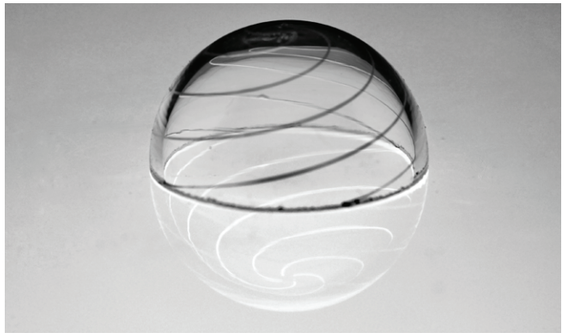


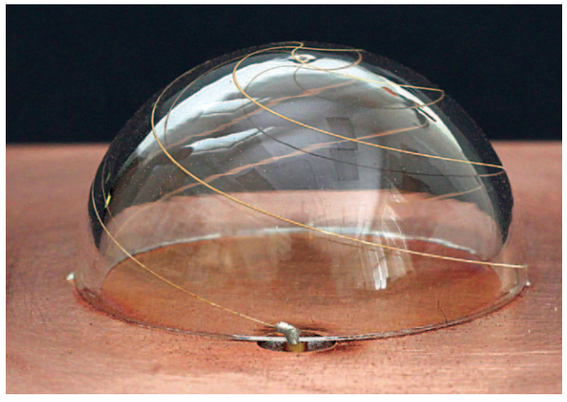


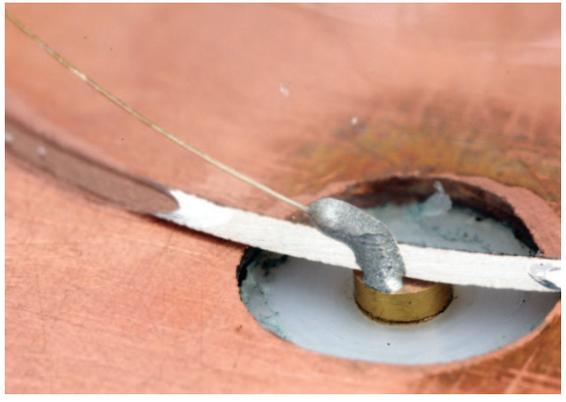


Hemispherical antennae constructed by Scott Slimmer, designed by Jake Lastname

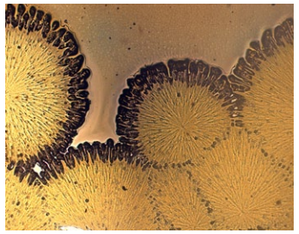


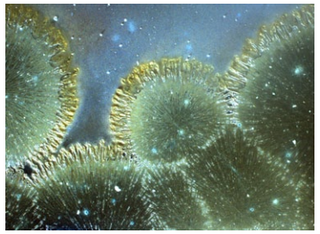


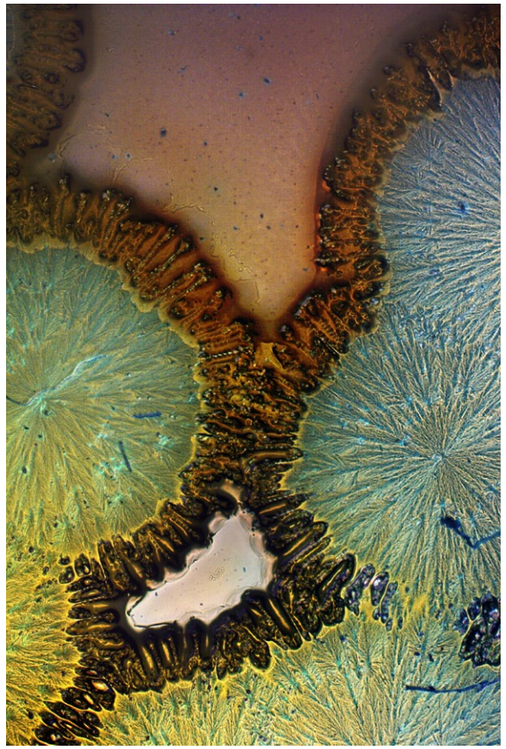




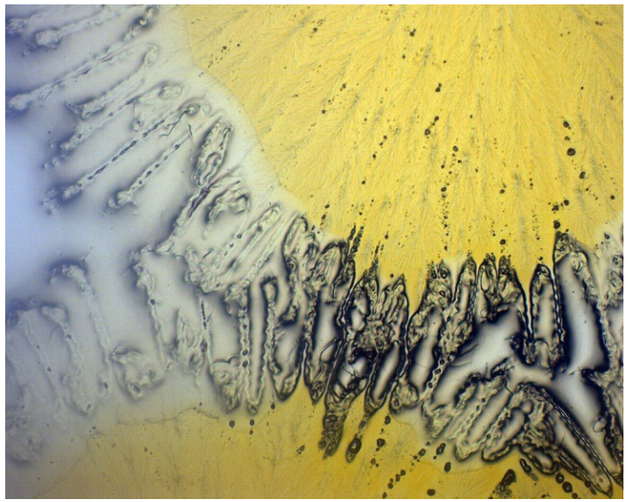
Silver nitrate dissolved in polyethylene glycol diacrylate

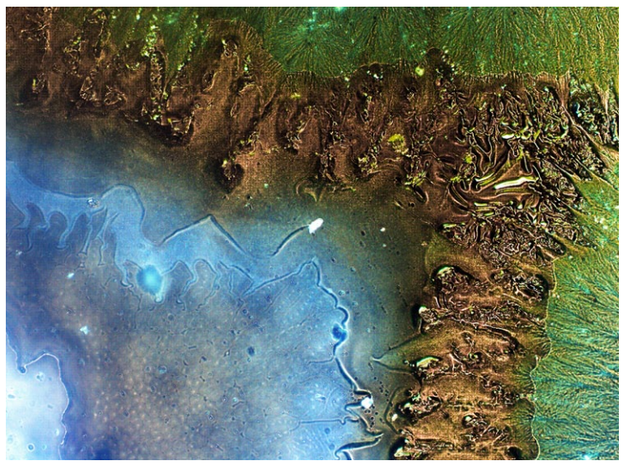


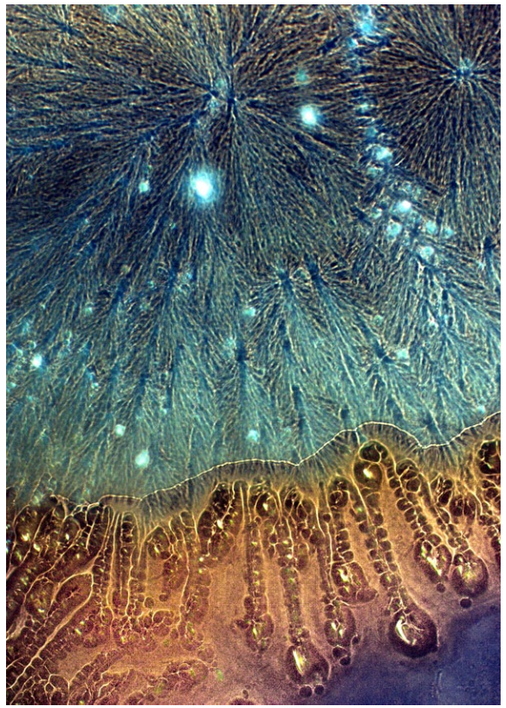




$AgNO_3$ in PEG-DA on glass imaged through an inverted microscope. Above, the angle of transmitted light was adjusted to combine light- and darkfield illumination.



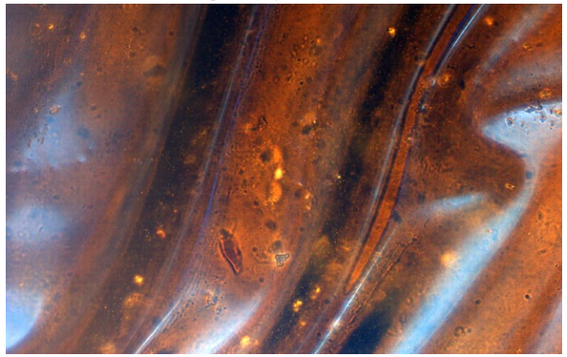


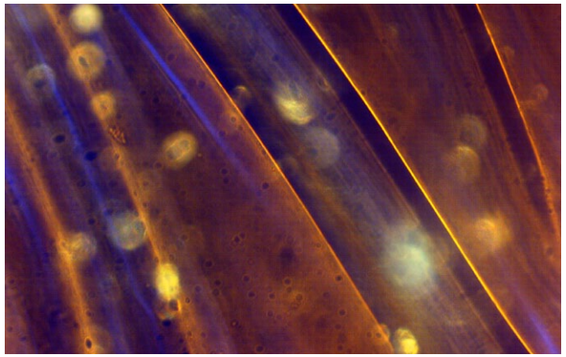


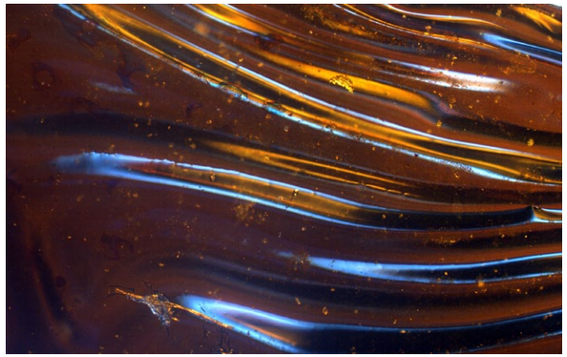
Left, I dissolved silver nitrate ($AgNO_3$) in polyethylene glycol diacrylate (PEG-DA), along with a crosslinking agent. I spun coat this solution onto 1" square glass slides. After deposition, the silver salt crystallized until the polymers was soldified by UV curing.

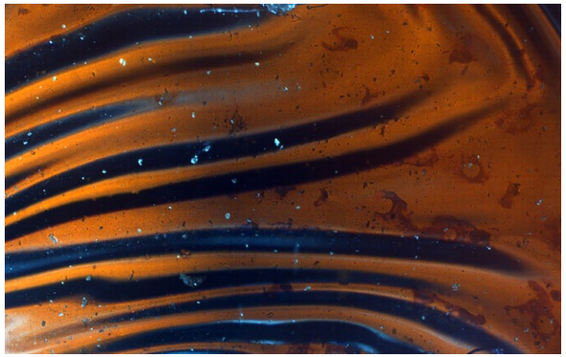
Below, a thicker layer was spun coat on glass. The film wrinkled and delaminated after curing.

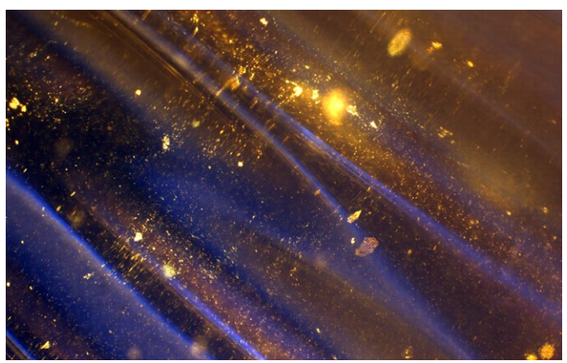
Thick film of $AgNO_3$ dissolved in PEG-DA

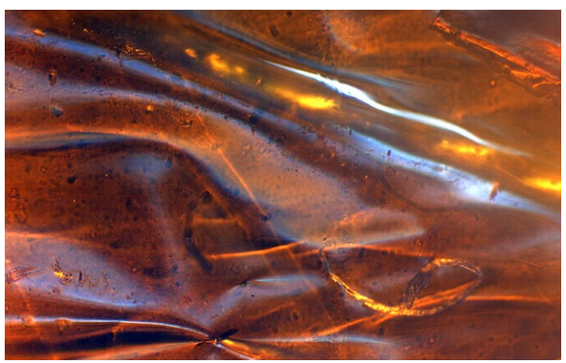






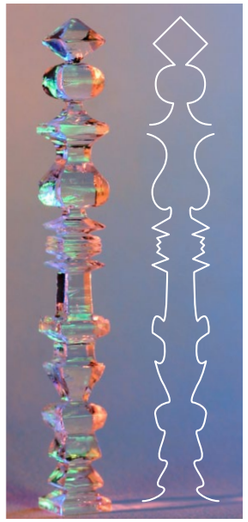


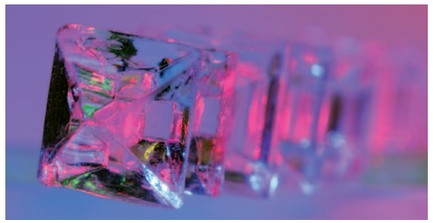


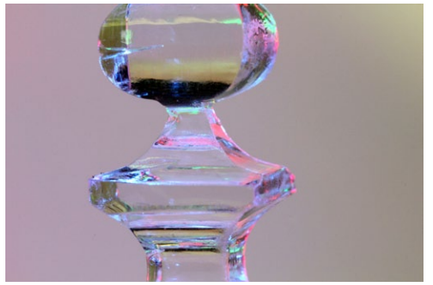


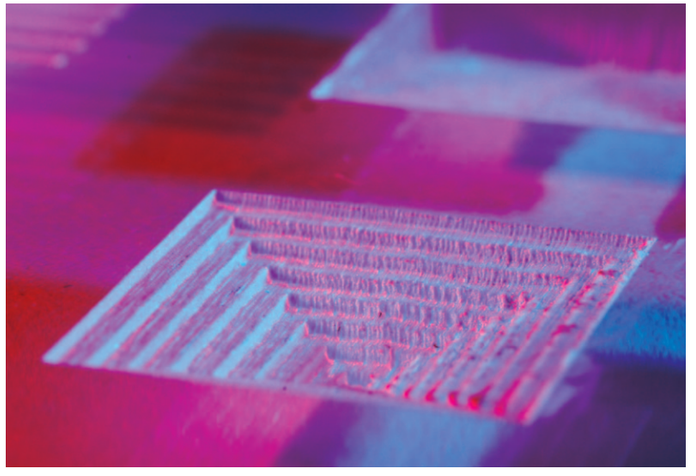
Hot air ballon festival Steamboat Sprins, CO.

Laser cutter chess pieces

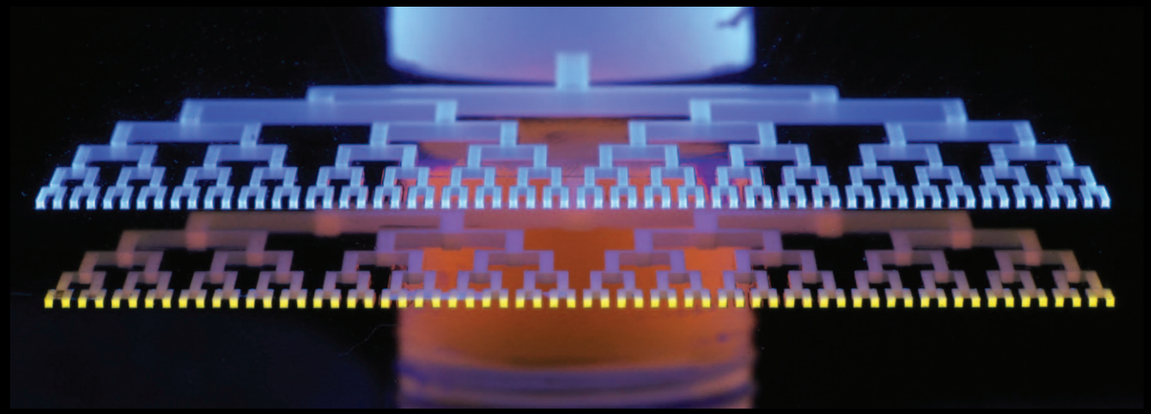


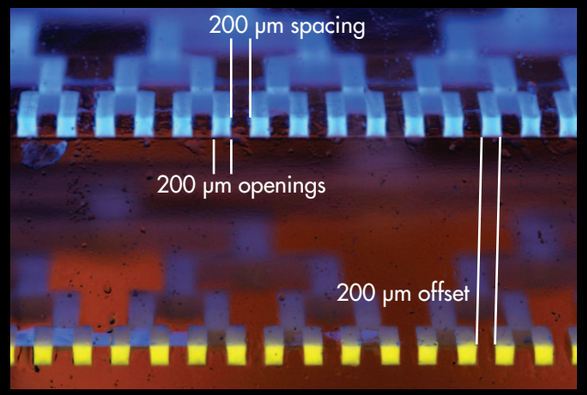


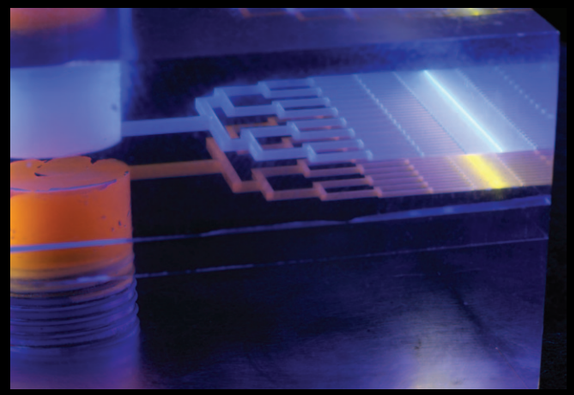


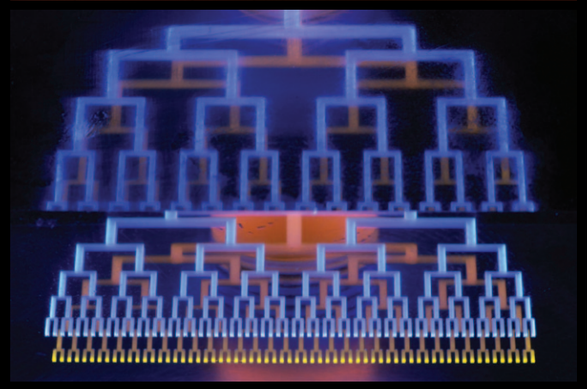


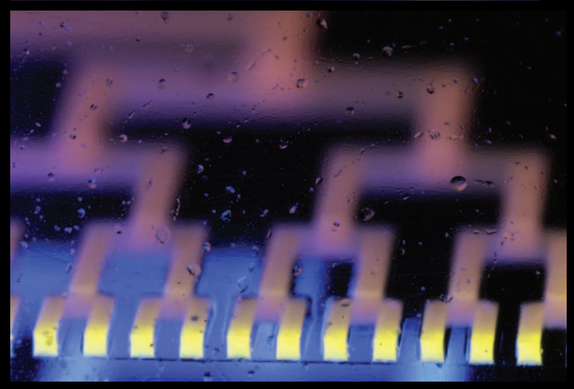
Two material deposition

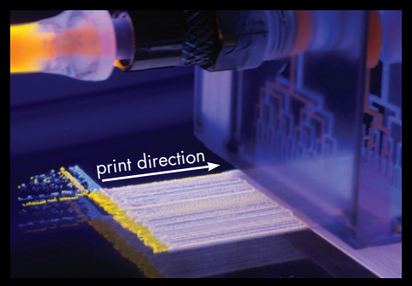


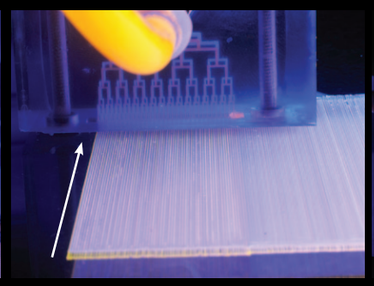


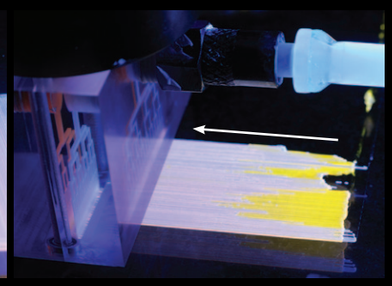


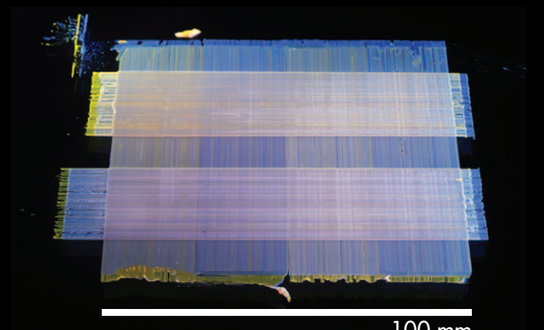


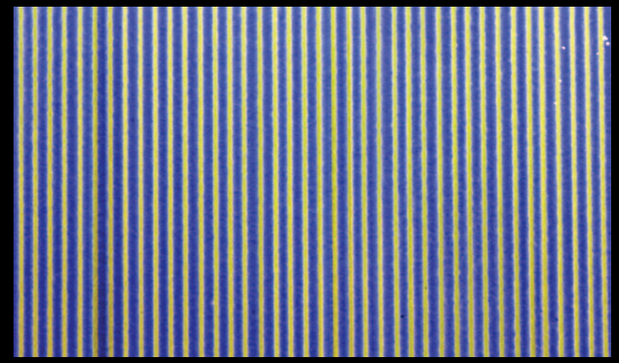


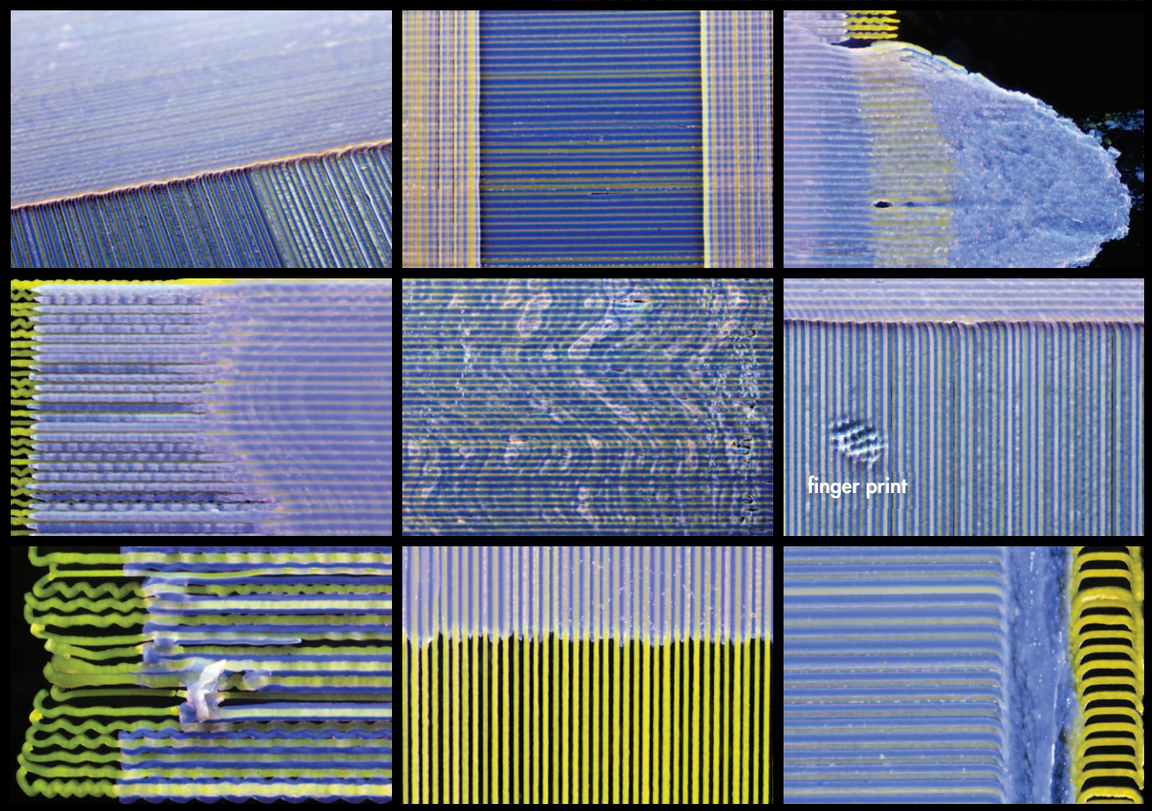


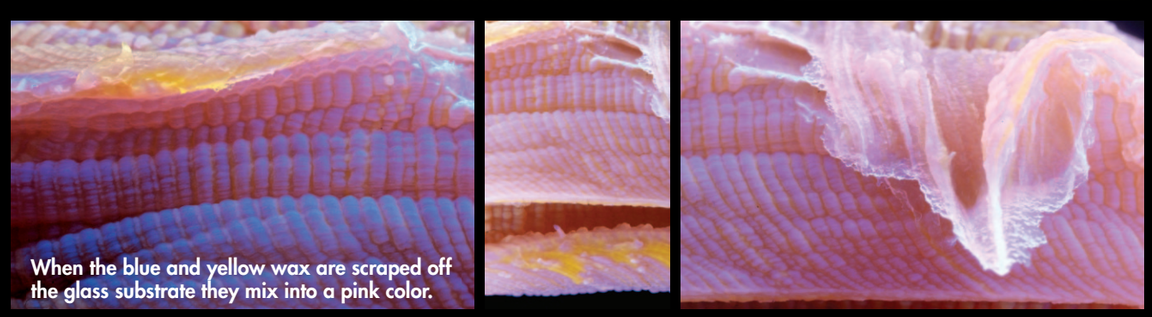




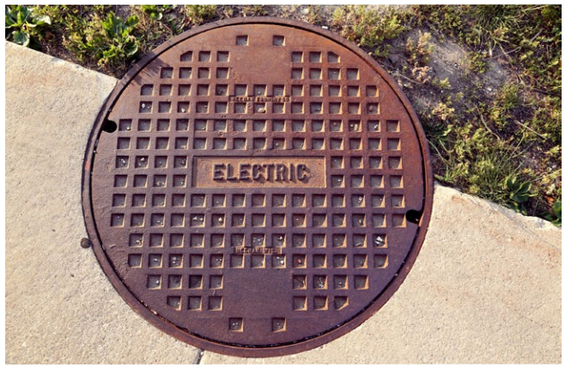


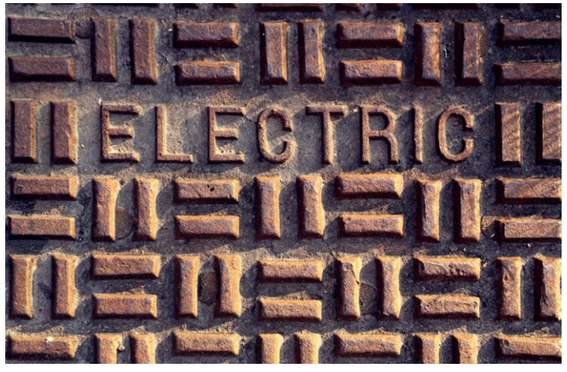


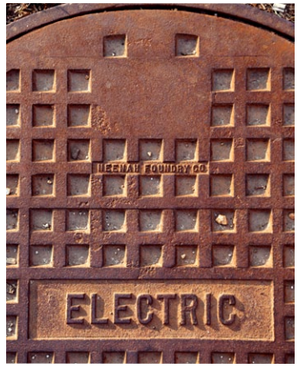




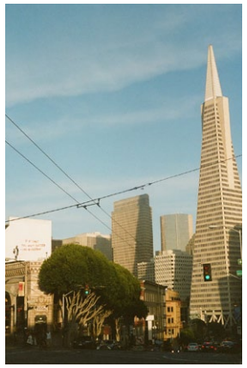
Manhole covers at sunset Urbana, Illinois

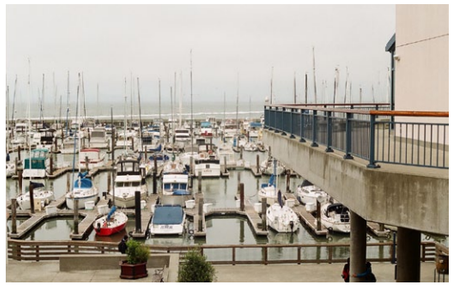


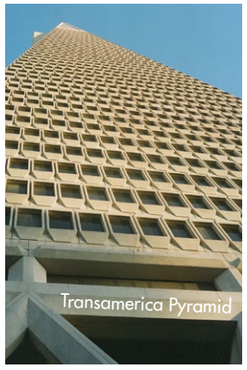




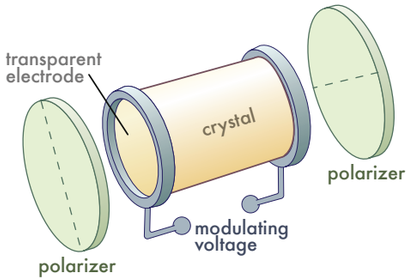
San Fransisco







Diagrams and plots redrawn from literature



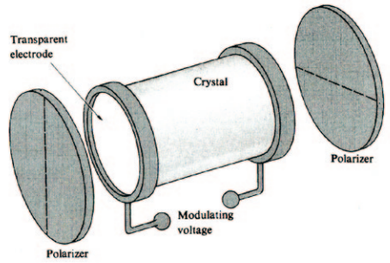
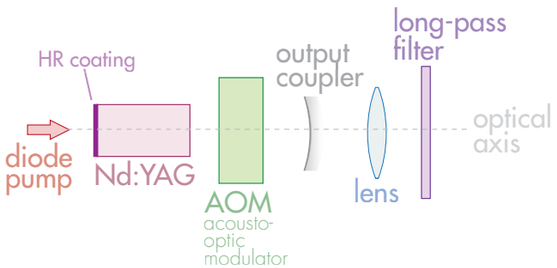


Figure 8.57 A Pockels cell.



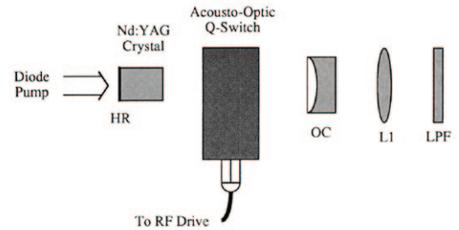
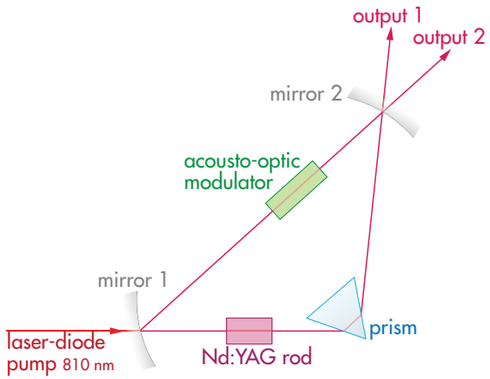
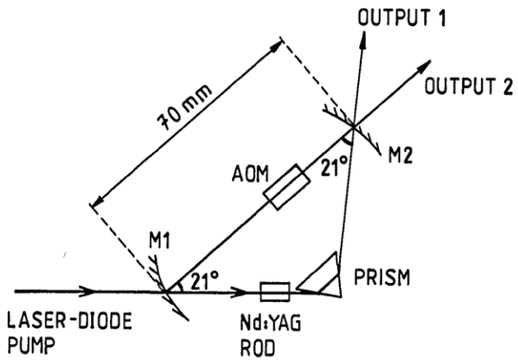
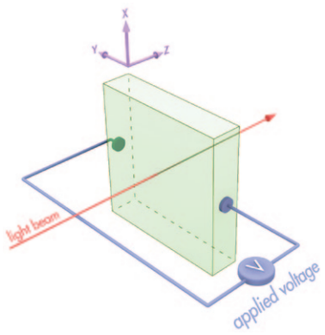
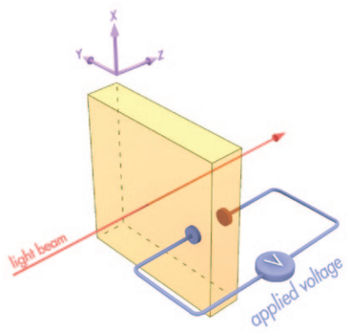


Fig. 1. Nd:YAG laser system: HR, high reflector; OC, output coupler; L1, lens; LPF, long-pass filter.









Office door nametags

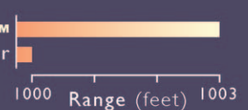
LASER on-a-stick™

Got pointing problems? Fed up with standard laser pointers that just don't work? **Worry no more!**

The revolution in laser technology has arrived!

This genius hybrid of optical electronics and a stick will change the way you point at things F O R E V E R !

Finally achieve tremendous range with drastically increased aimability!



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Will Billford, President,
International Society of Stick Engineers

Sticks were alright and lasers were pretty good. But pointing with ***Laser-on-a-Stick™*** is like nothing else!

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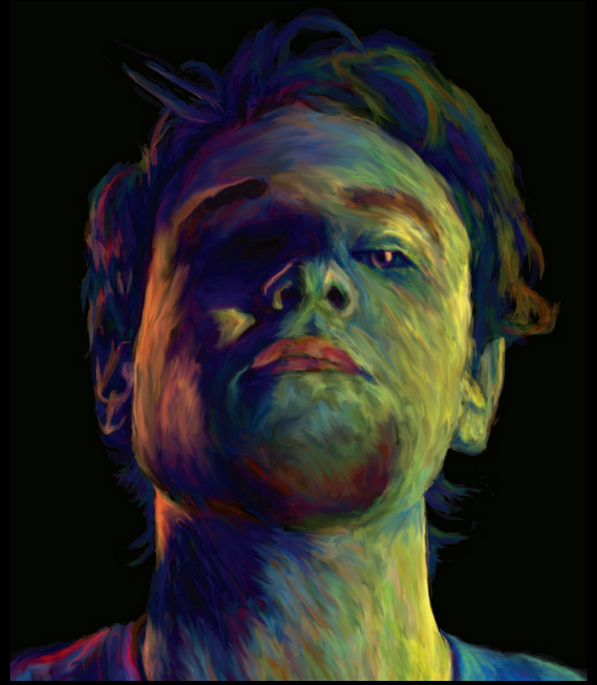
Bar crawl t-shirt design

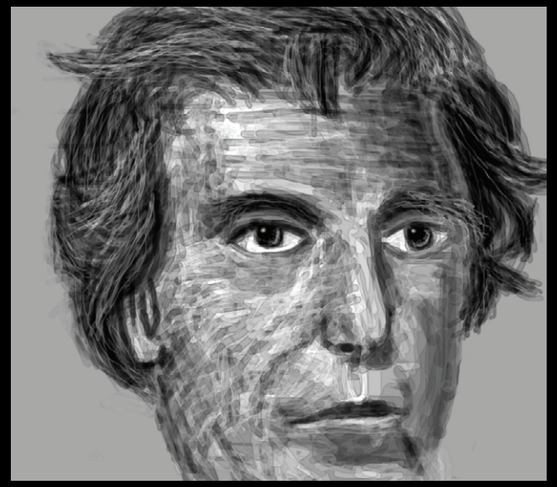
3rd Annual
MatSE Bar Crawl 2012

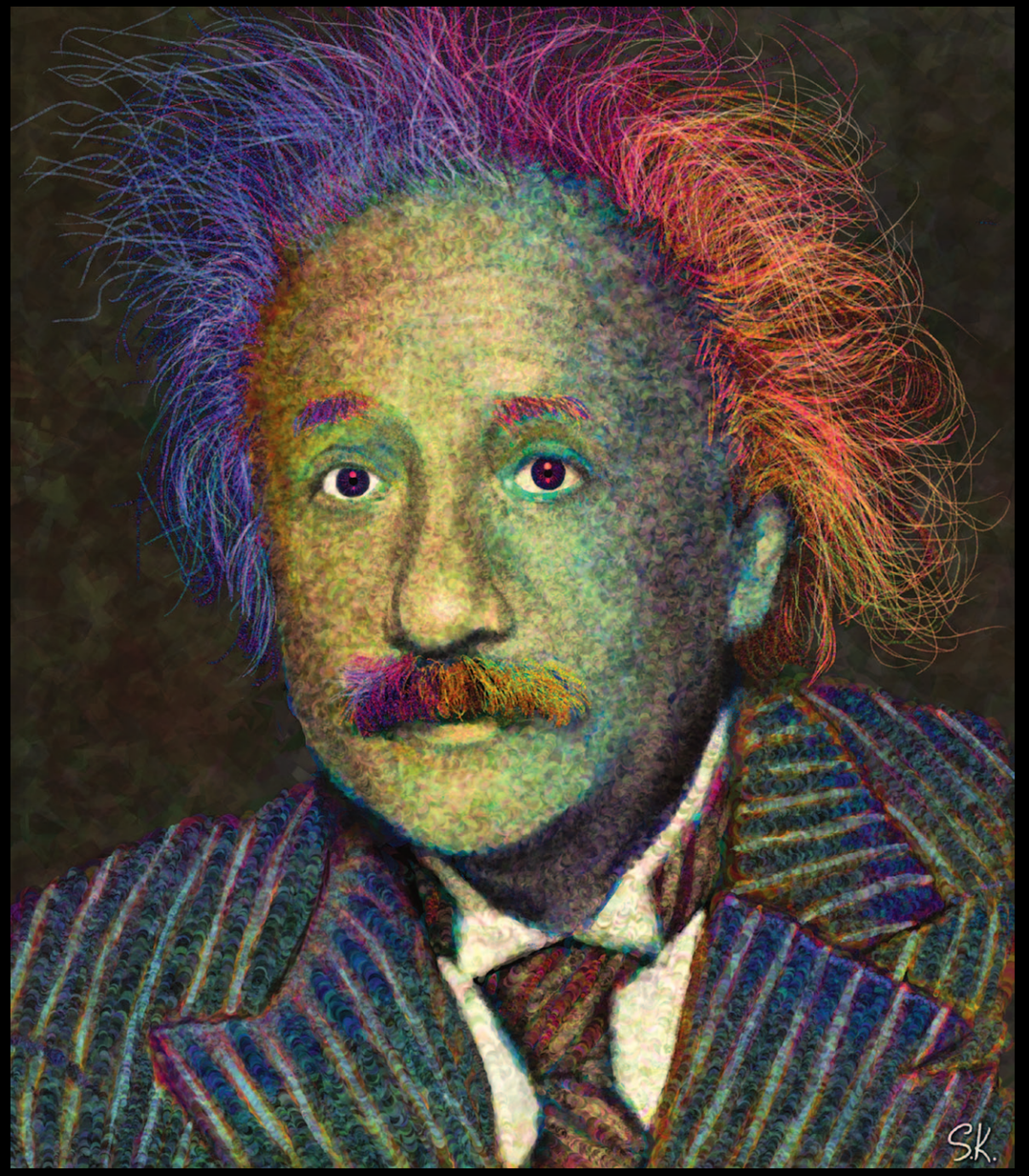
Lumberjacks

When professors grip your future tight
and school cuts down your livelihood,
the crutch of beer keeps you upright
and standing tall just as you should.

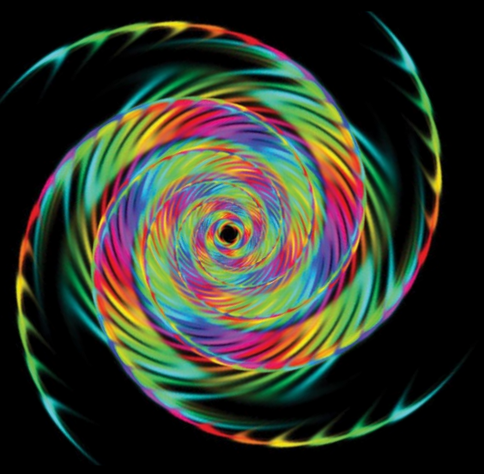
Digital paintings Wacom tablet + Photoshop







Colorful logarithmic spirals



Colorful swirly patterns

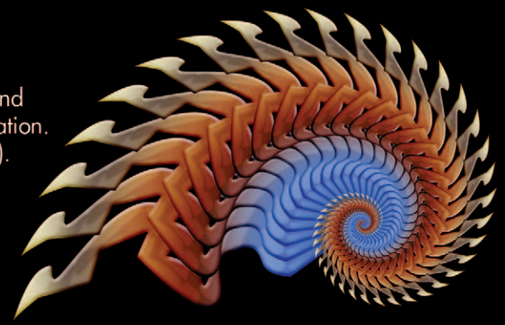
How to create a colorful logarithmic spiral in Photoshop

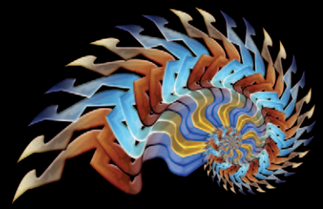
Step 1
Create a wacky shape using the pen tool.

Step 2
Give the shape colorful layer styles. Rasterize the layer.

Step 3
Rotate the layer about a point near an end of the shape, while shrinking the width and height

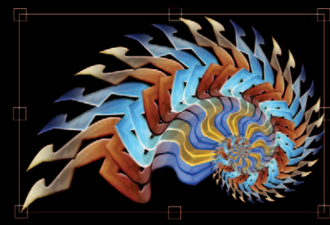
Step 4
Duplicate the layer and repeat the transformation. (cmd+J, cmd+shift+T). Repeat these two commands several dozen times.



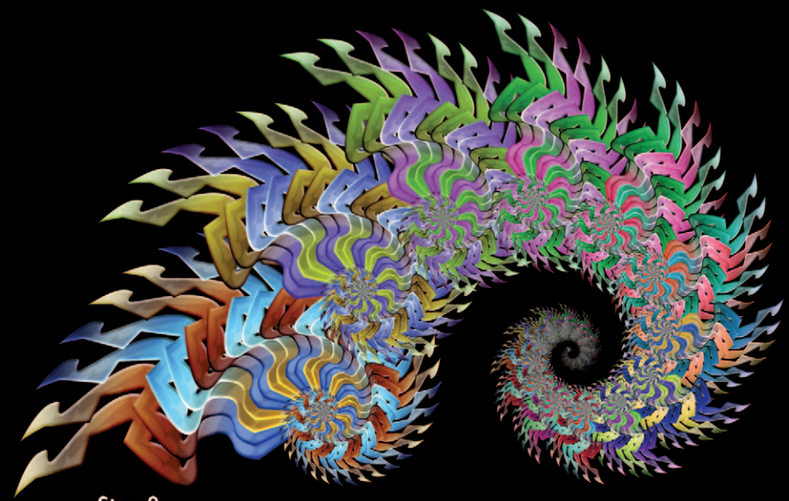


Step 5
Invert some of the elements of the spiral.

Step 6
Even spirals can be spiraled! Flatten a spiral into a single layer. Transform the layer as in Step 3, but move the pivot point outside the layer's bounding box.



Step 7
Duplicate these new layers repeatedly, as in step 4.



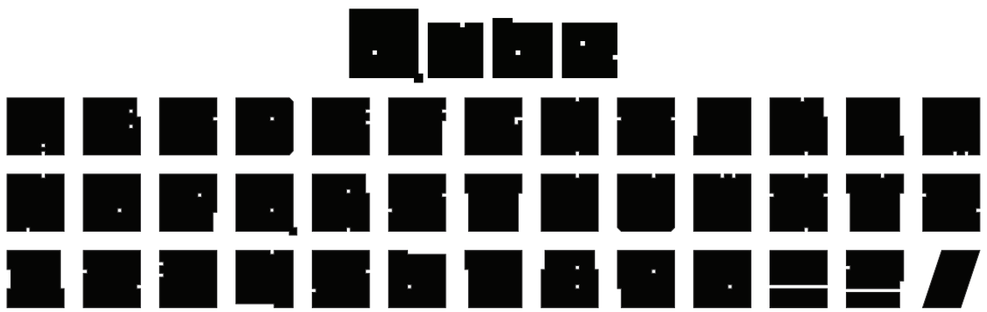
Step 8
Sequentially shift the hues of each spiral element by 30° to give the spiral a rainbow coloring.

Edgar

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

edgar's dream

abcdefghijklmnopqrstuvwxyz

wonder

ABCDEFGHIJKLMNOPQRSTUVWXYZ
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