

# Cinema 4D Noise Texture Reference

v1.0

June 22, 2010

[www.cg.tutsplus.com](http://www.cg.tutsplus.com)

ABOUT

Cinema 4D has some excellent noise textures. However, it can be easy to forget what they look like. Then I stumbled upon Eric Gooch’s Web site, which listed all of the noise shaders with respective examples.This was very helpful. However, I wondered how I could make it more helpful. What if I could put this list in an easy to read PDF document and then submit it to the public? Would that help the community?

I talked to Gooch, and he said, “Go for it!” I hope that what follow helps you model. Any suggestions for improvement on this document should be sent to: elimc184@hotmail.com.

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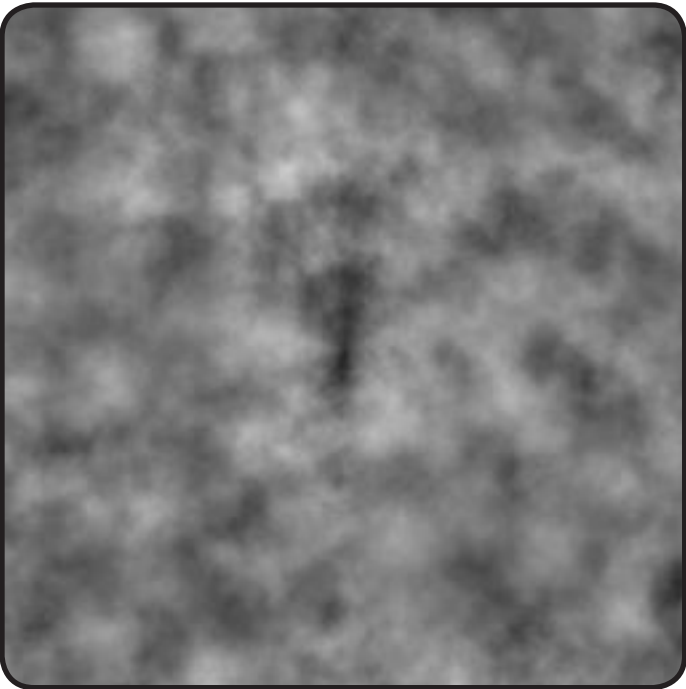
NOTES

The example images in the reference are composed of a standard sphere that has a Sub-Polygon Displacement using the named texture on each page. I used a Subdivision Level of six to bring out more detail. The numbers that you see next to each sample represent the changes I made in both the Global Scale of the texture itself, and the height of the Displacement.

To help define the texture a little more, warm lighting comes from above, cool from below, and a short, wide specularity has been applied. The sphere itself has not been scaled from the default size, so if you use the settings you see in the samples, your results should be the same.

Click on the links below to be taken to that page:

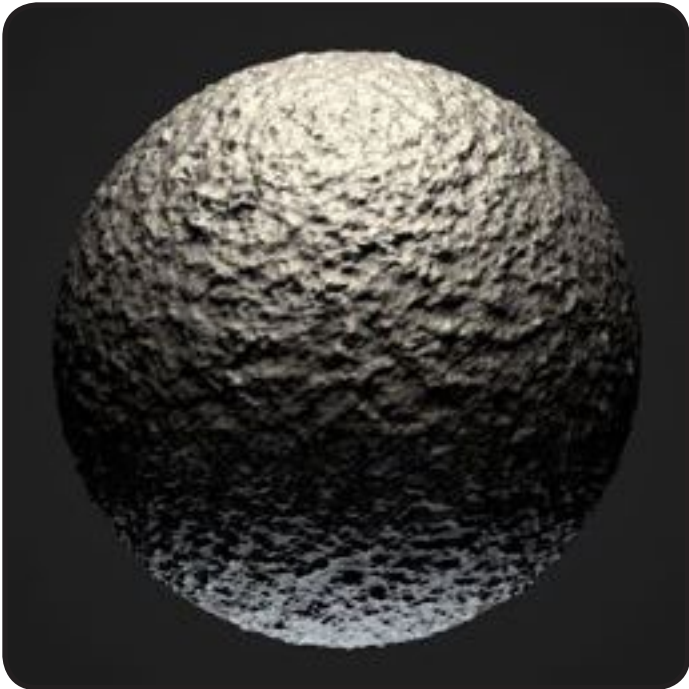
- |                                   |                                |
|-----------------------------------|--------------------------------|
| “Blistered Turbulence” on page 5  | “ober” on page 35              |
| “box noise” on page 7             | “pezo” on page 37              |
| “buya” on page 9                  | “poxo” on page 39              |
| “cell noise” on page 11           | “random” on page 41            |
| “cell voronoi” on page 13         | “sema” on page 43              |
| “cranal” on page 15               | “stupl” on page 45             |
| “dents” on page 17                | “turbulence” on page 47        |
| “displaced turbulence” on page 19 | “voronoi 1” on page 49         |
| “fbm” on page 21                  | “voronoi 2” on page 51         |
| “hama” on page 23                 | “voronoi 3” on page 53         |
| “luka” on page 25                 | “displaced voronoi” on page 55 |
| “mod noise” on page 27            | “vl noise” on page 57          |
| “naki” on page 29                 | “wavy turbulence” on page 59   |
| “noise” on page 31                | “zada” on page 61              |
| “nutous” on page 33               |                                |



GRAYSCALE



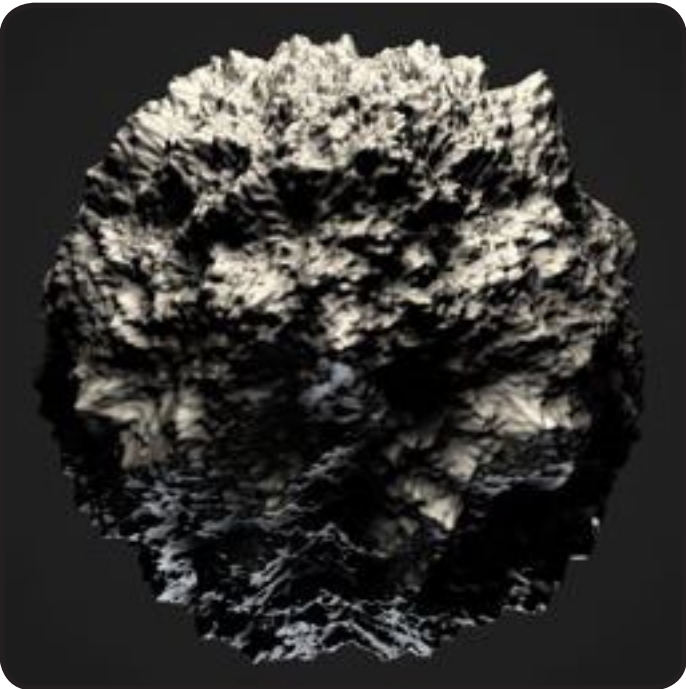
PLANAR



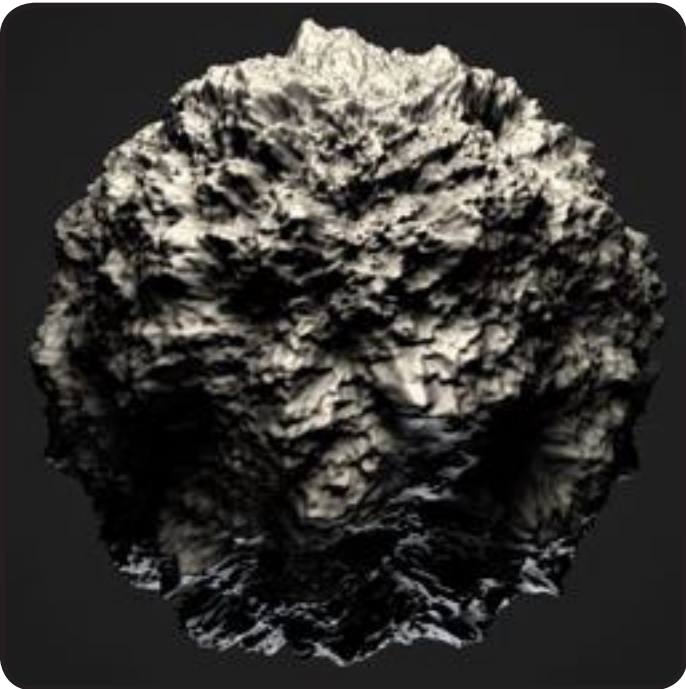
SCALE 50, HEIGHT 2

Blistered Turbulence has a good random distribution of detailed lights and darks, providing an almost mineral-like appearance.

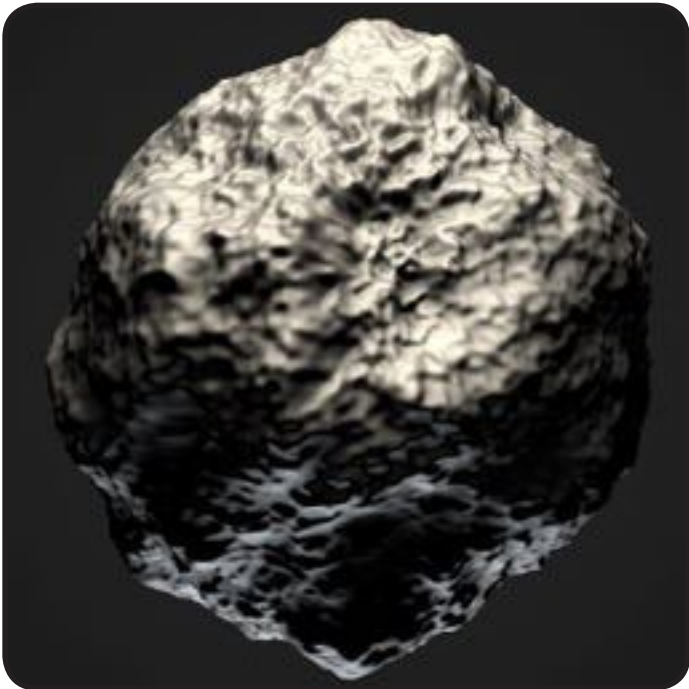
REVERSED



SCALE 250, HEIGHT 14

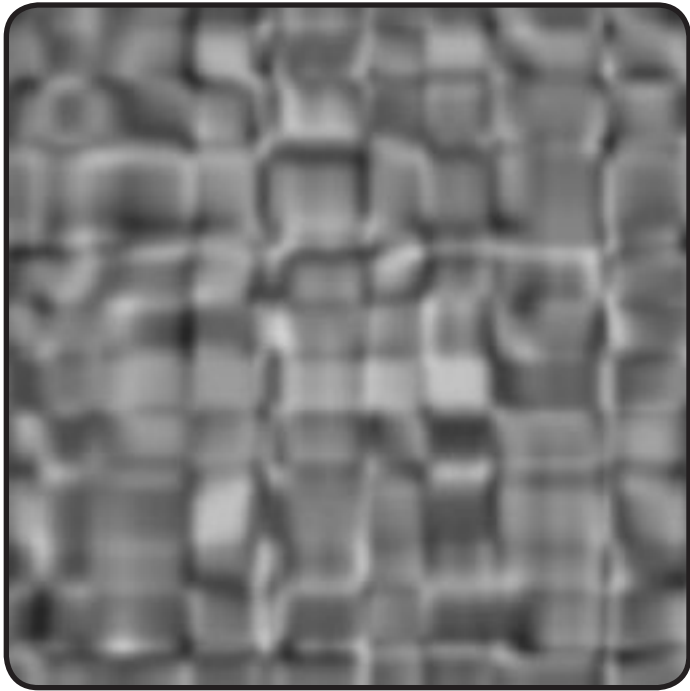


SCALE 600, HEIGHT 50

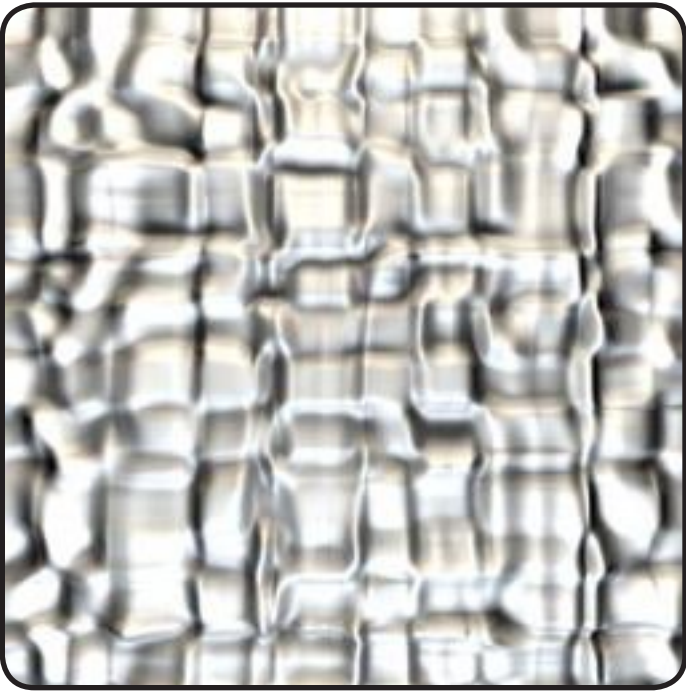


BLISTERED TURBULENCE

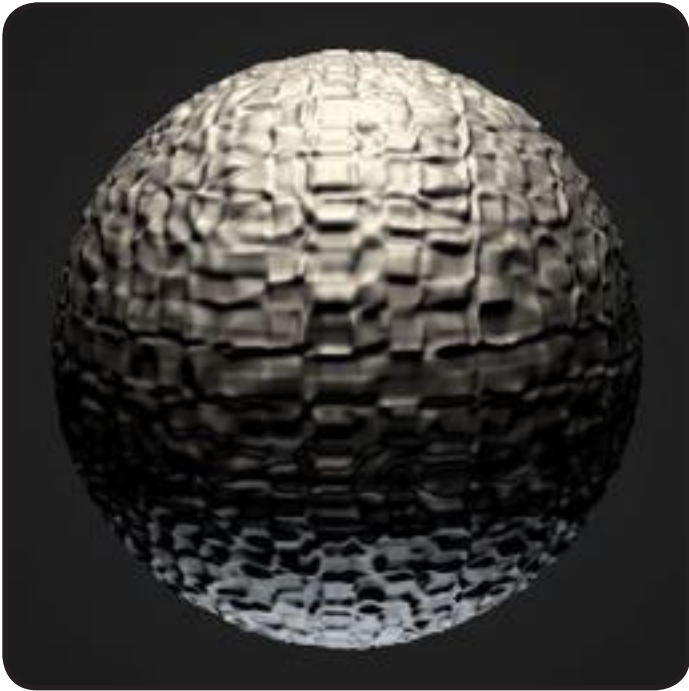




GRAYSCALE



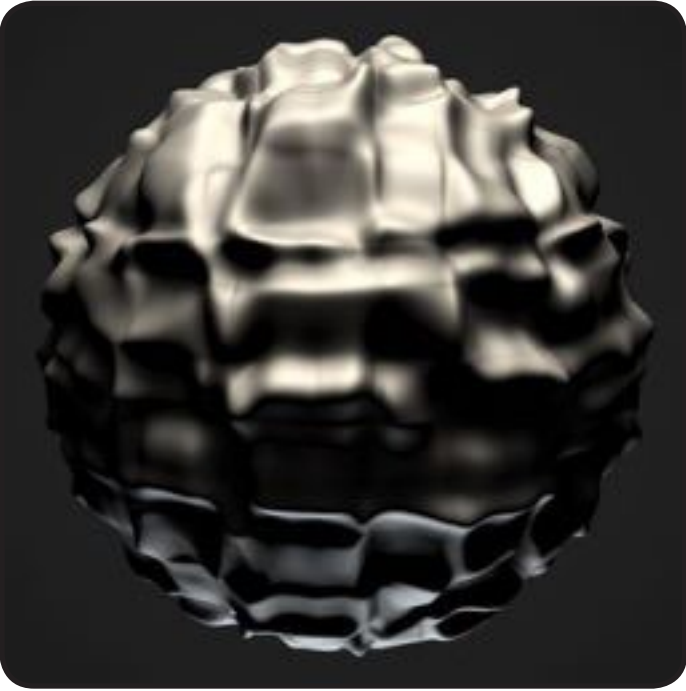
PLANAR



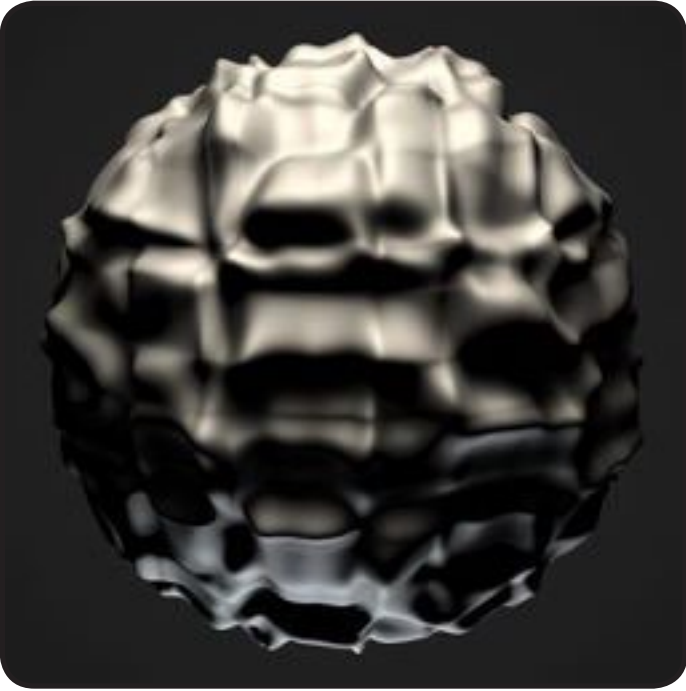
SCALE 50, HEIGHT 2

Box Noise is a more ordered pattern, sort of like squares thrown out of focus. Still random, but a more cubic pattern than most.

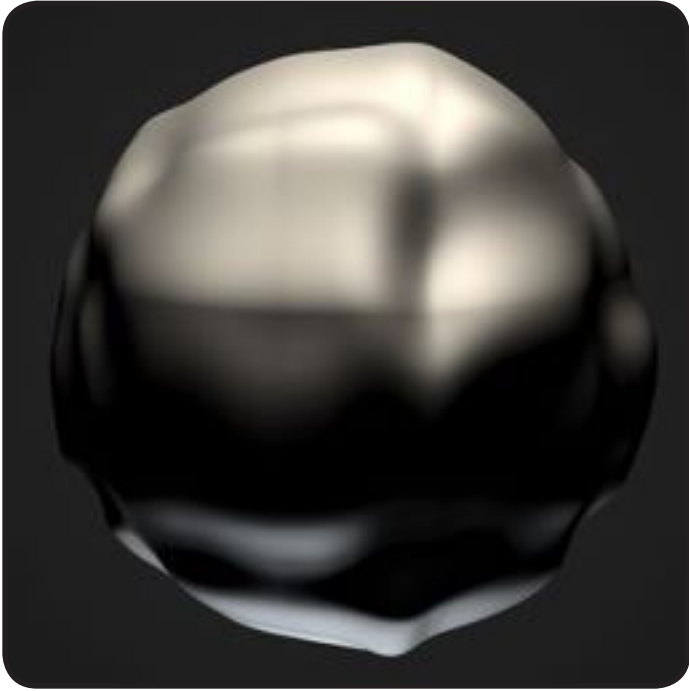
REVERSED



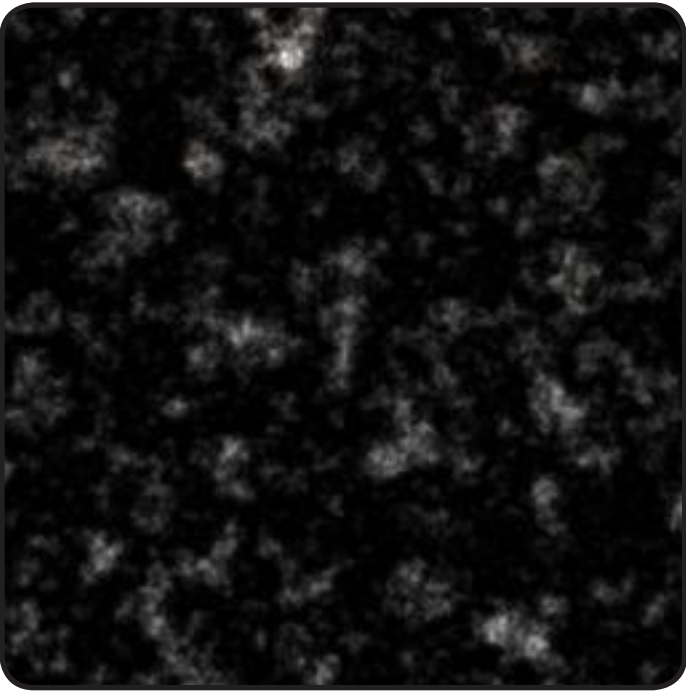
SCALE 150, HEIGHT 10



SCALE 400, HEIGHT 10







GRAYSCALE



PLANAR



SCALE 75, HEIGHT 1

Buya offers some spikey goodness. Because of the more intermittent light areas and a predominantly black base, you get peaks rising from a fairly low base that still have some detail. Reversed, it gives a pitted surface.

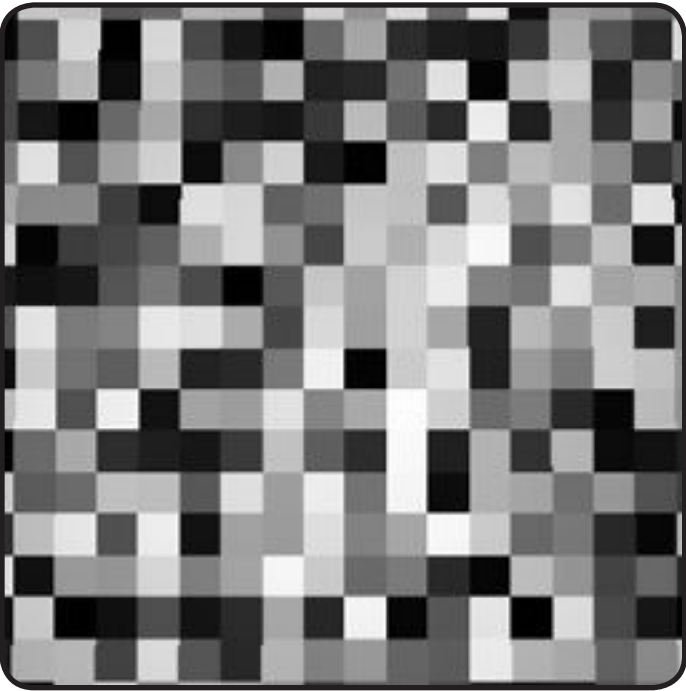
REVERSED



SCALE 350, HEIGHT 5



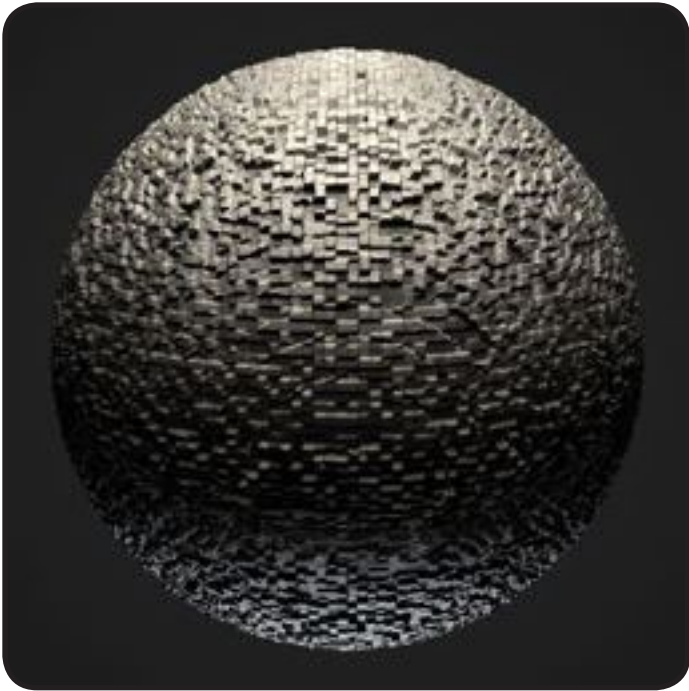
SCALE 600, HEIGHT 20



GRAYSCALE



PLANAR



SCALE 25, HEIGHT 1.5

Cell Noise is squares of random gray values. Looks almost like blocks of wood, at various heights, or tile. The small size it looks almost like pixels or digital noise.

REVERSED



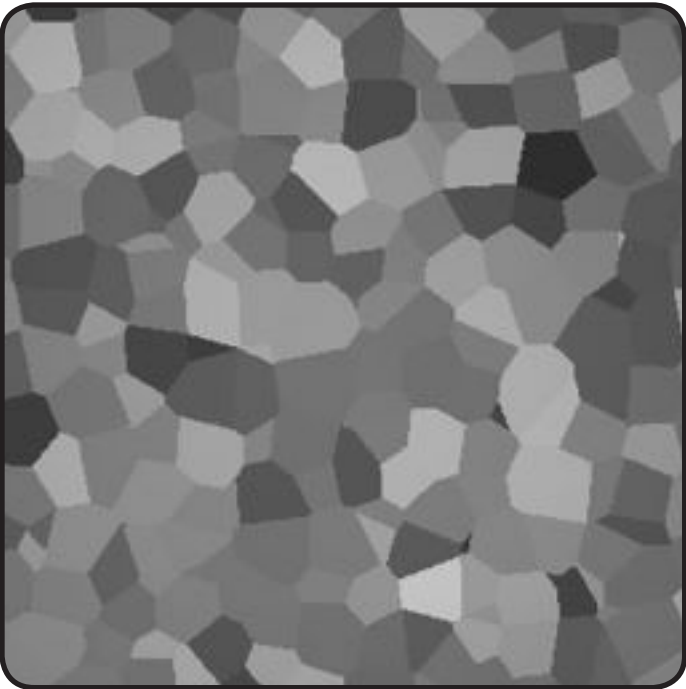
SCALE 150, HEIGHT 3



SCALE 600, HEIGHT 5



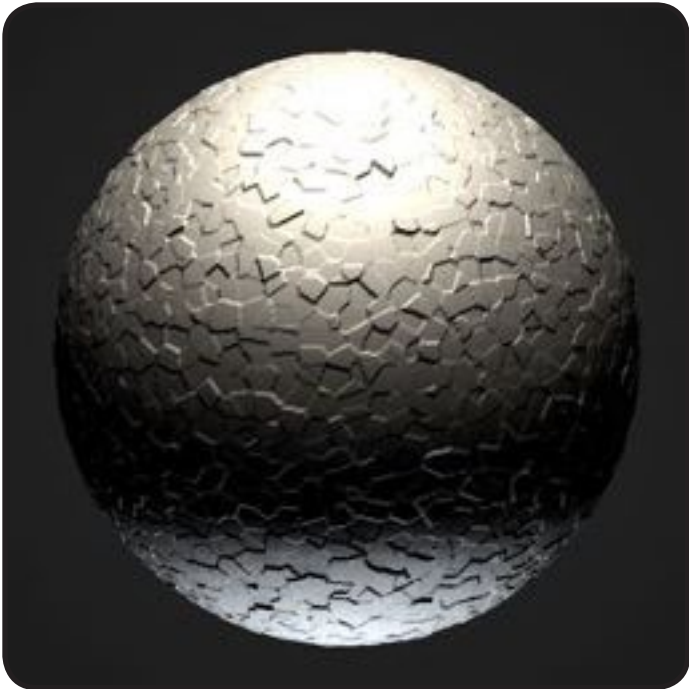




GRAYSCALE

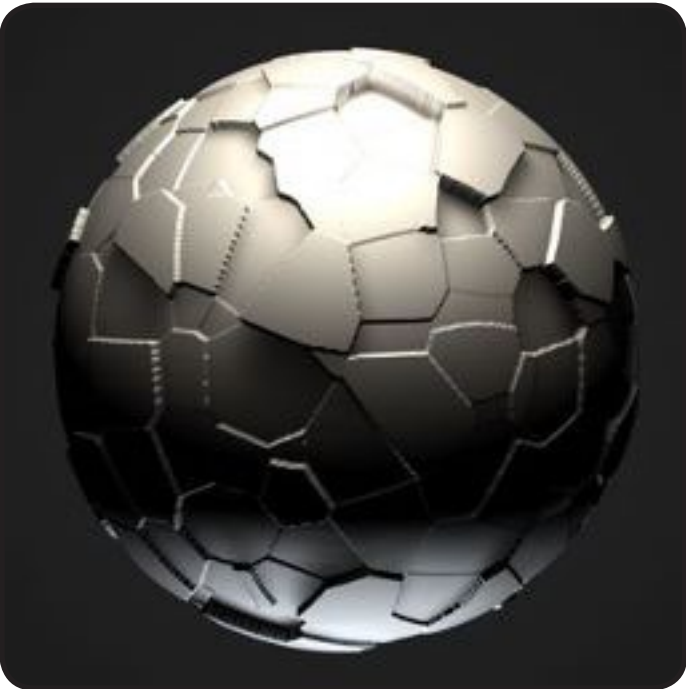


PLANAR



SCALE 50, HEIGHT 1

Cell Voronoi is similar to Cell Noise, but instead of squares has a more mosaic-like or fractured pattern. It's a little reminiscent of slate or fieldstone.



REVERSED

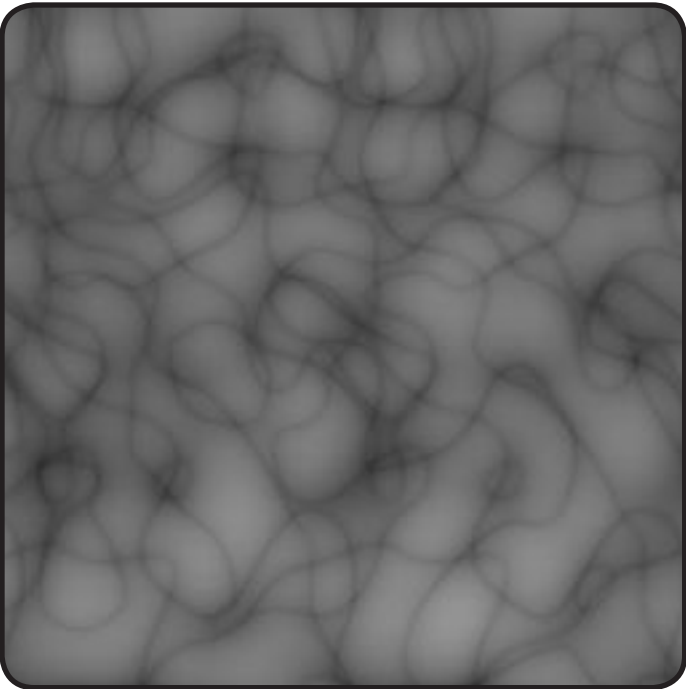


SCALE 200, HEIGHT 5

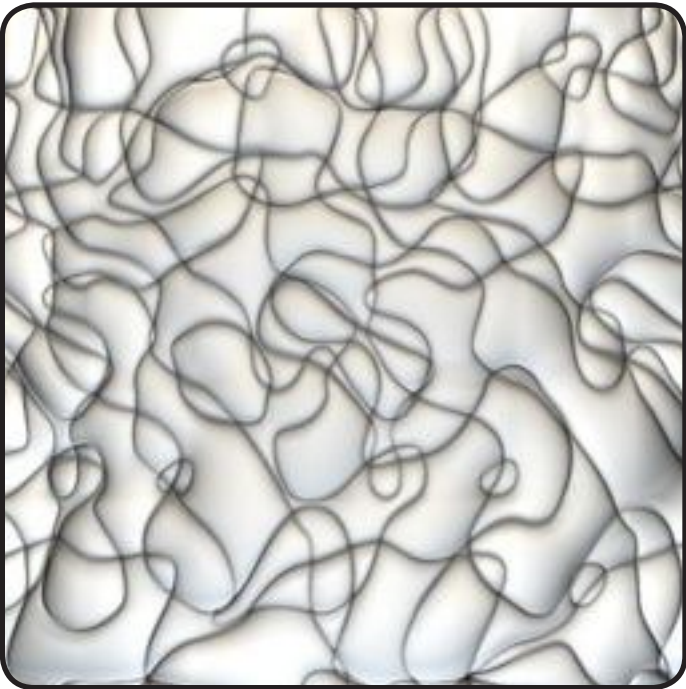


SCALE 600, HEIGHT 20

CELL VORONOI



GRAYSCALE



PLANAR



SCALE 100, HEIGHT 3

Cranal has puffy raised areas between smoothly curving lines. It looks a little like padded fabric that has stitching running through it randomly. It also has a strange organic feel at some scales. It is interesting reversed, too.

REVERSED

SCALE 400, HEIGHT 15

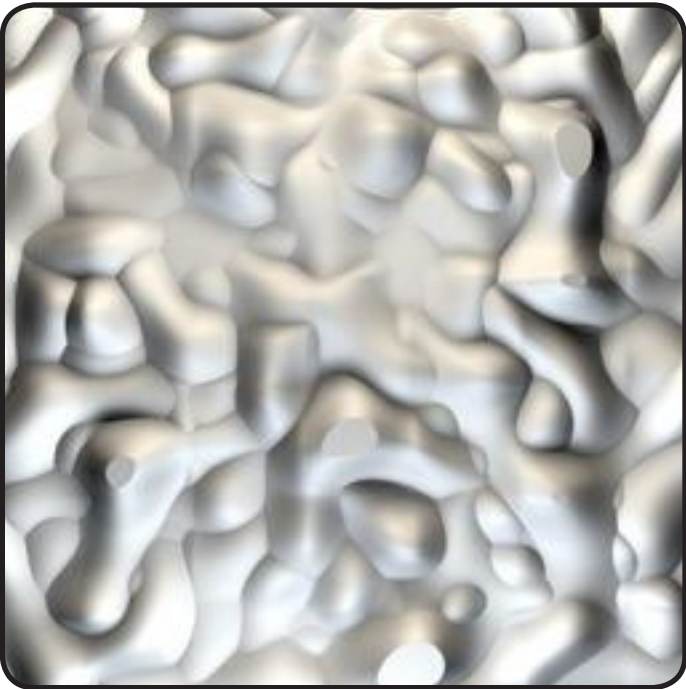
SCALE 800, HEIGHT 30



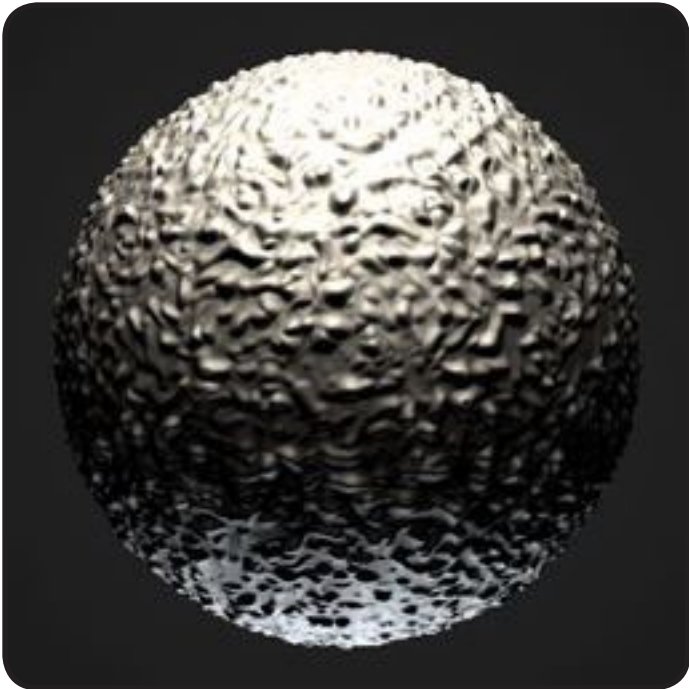




GRAYSCALE



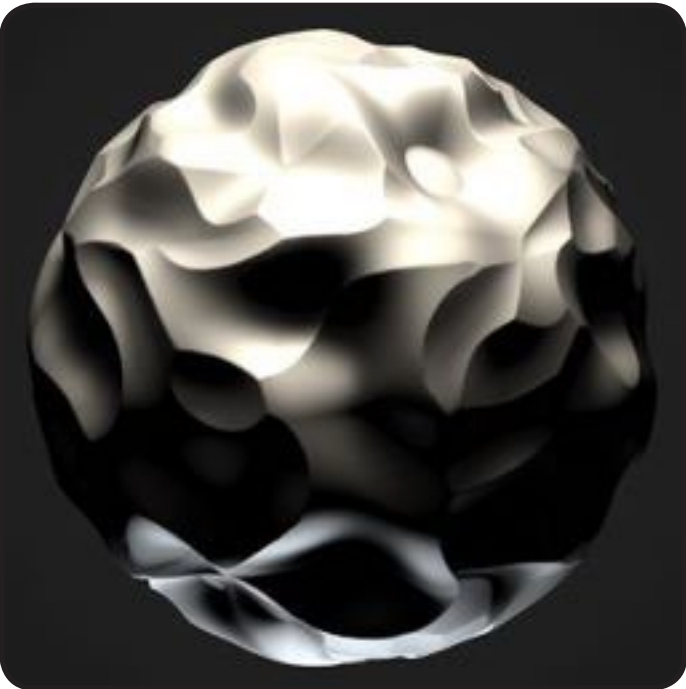
PLANAR



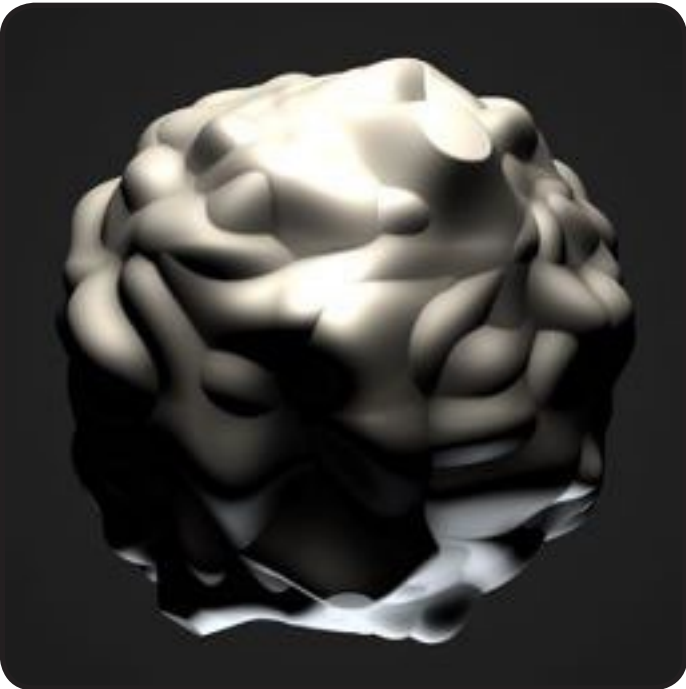
SCALE 65, HEIGHT 1

Dents has a strange twisting, layered feel to it. Looks a bit like piles of organic “something.” When reversed, looks like pieces have been carved out with a spoon.

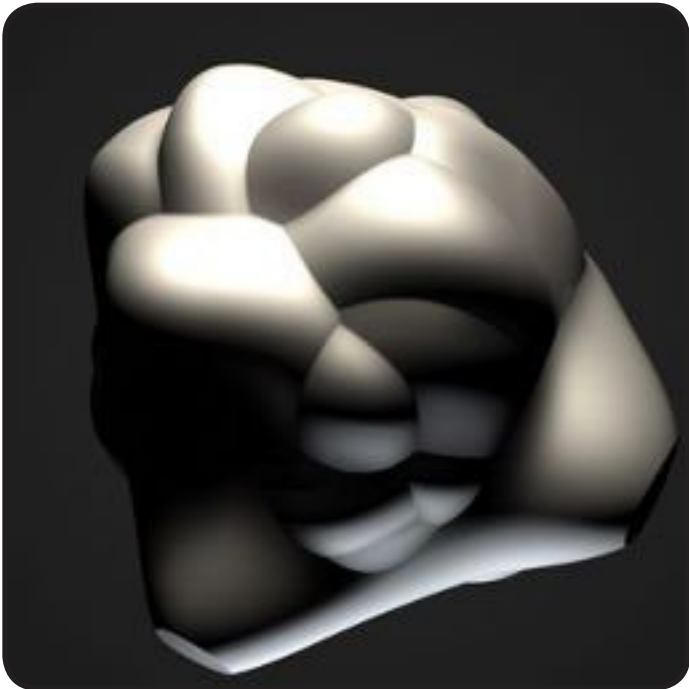
REVERSED

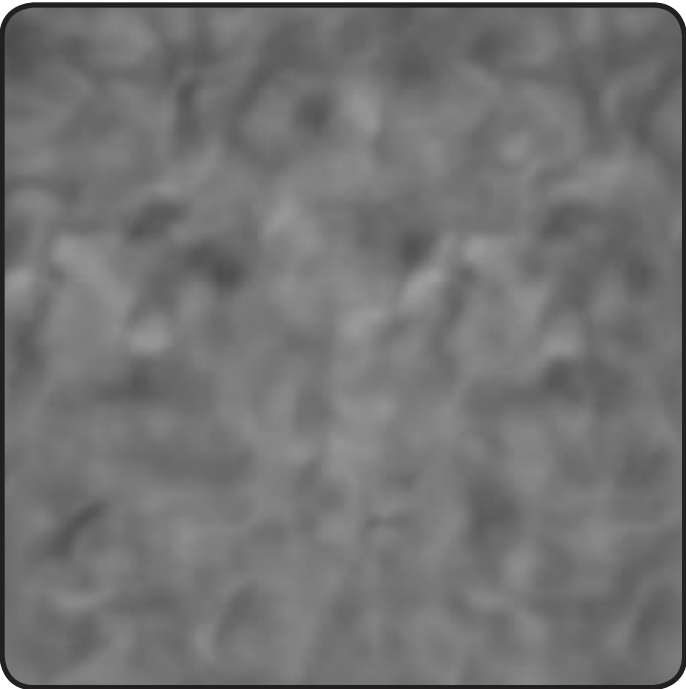


SCALE 400, HEIGHT 7



SCALE 900, HEIGHT 14

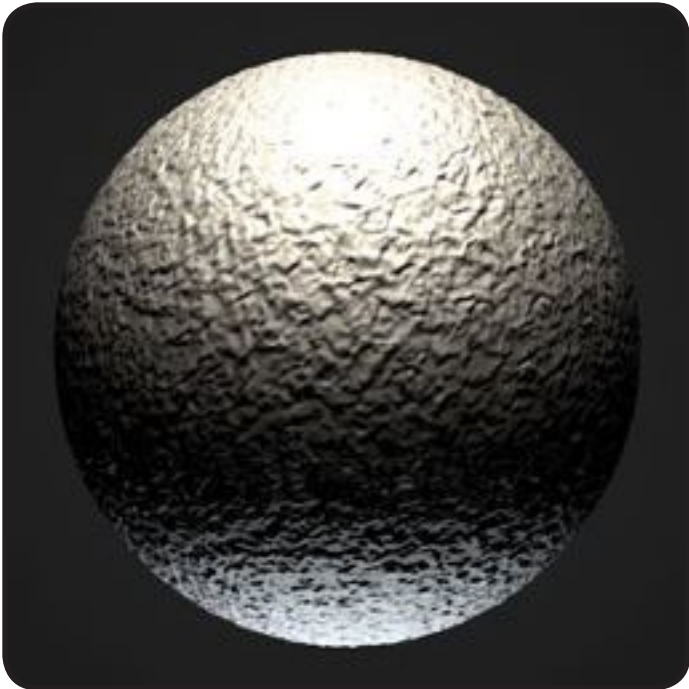




GRAYSCALE

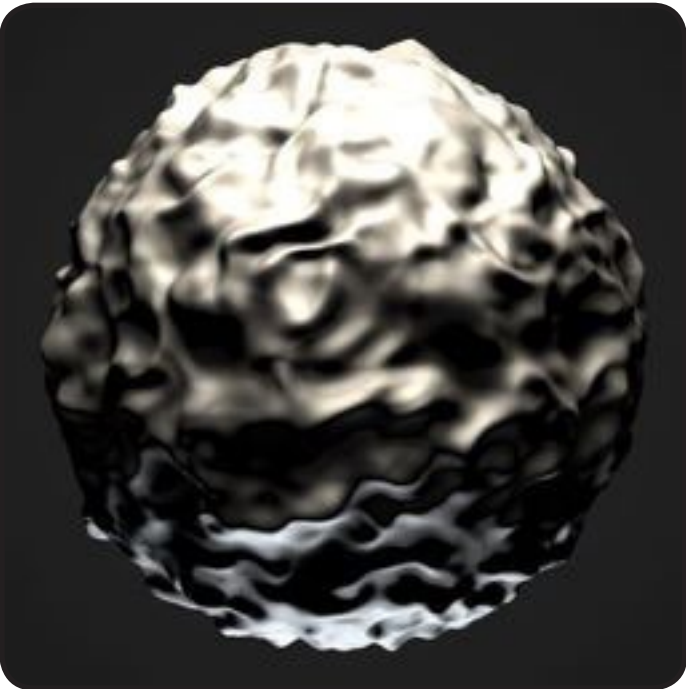


PLANAR

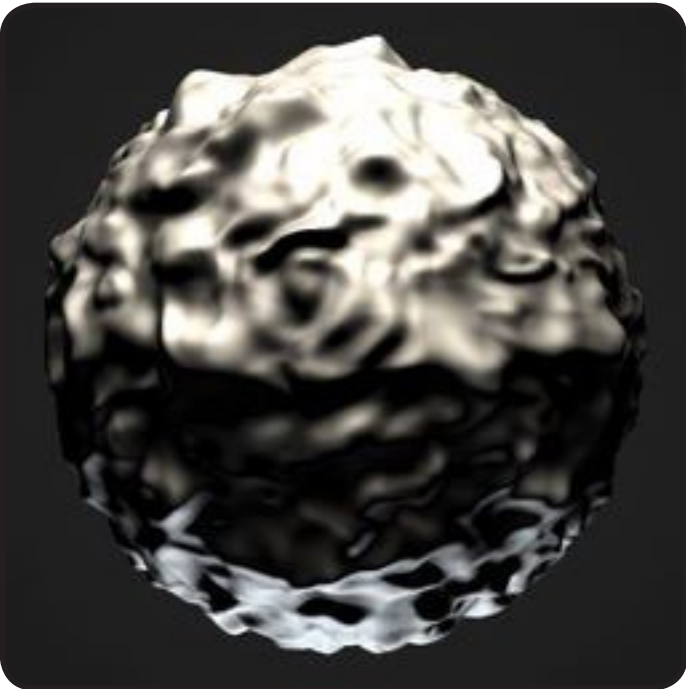


SCALE 50, HEIGHT 2

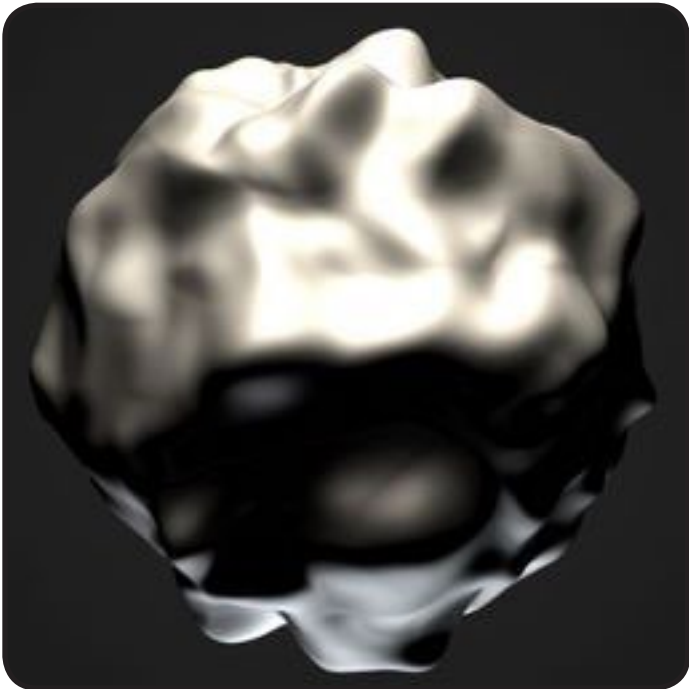
Displaced Turbulence is a little softer overall than some of the others, but still has a broken randomness to it so that it's not too even.



REVERSED



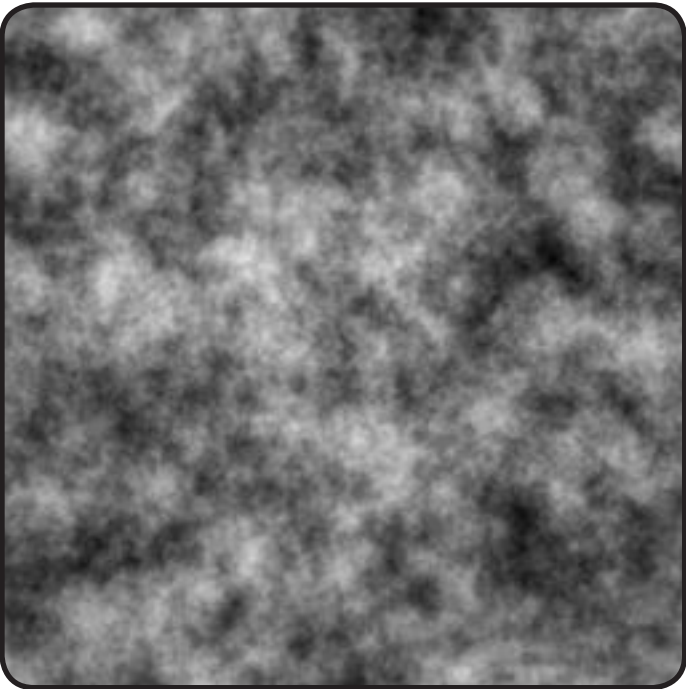
SCALE 250, HEIGHT 14



SCALE 600, HEIGHT 50

DISPLACED TURBULENCE





GRAYSCALE

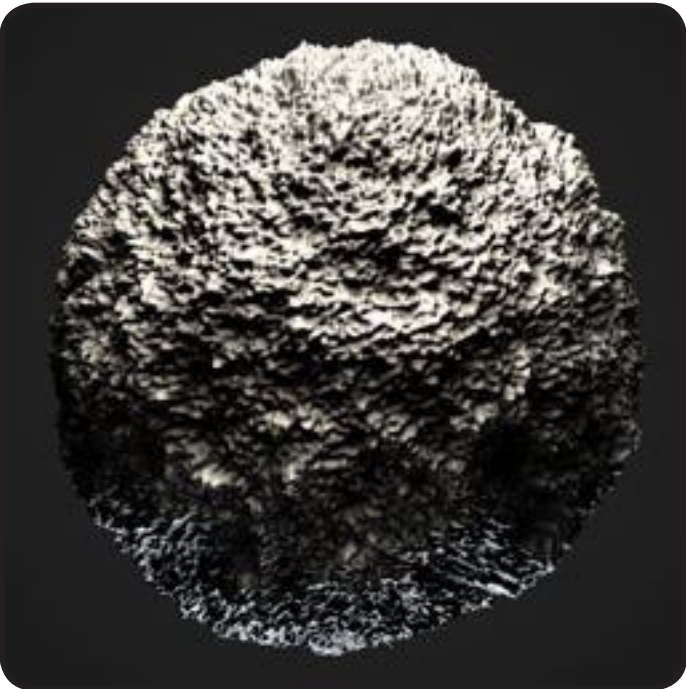


PLANAR



SCALE 50, HEIGHT 1

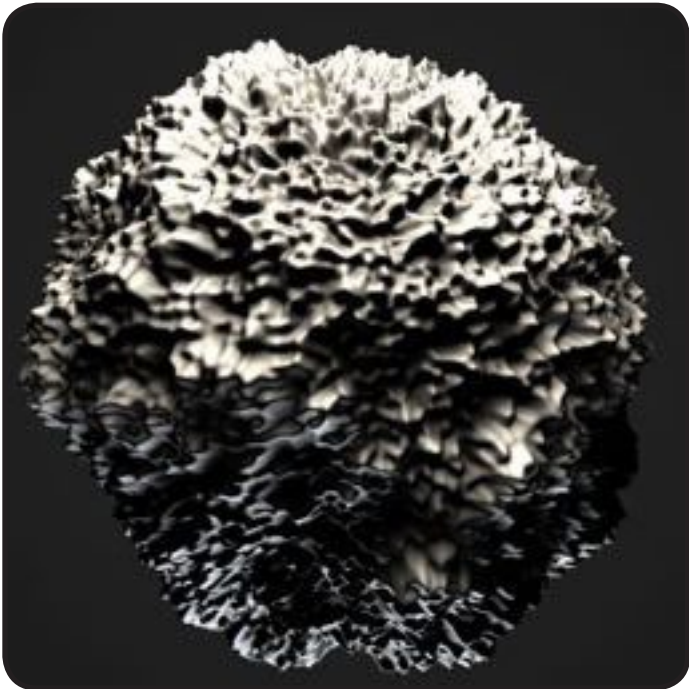
FBM has a lot of finer detail to it for a variety of layers. Very rough, organic or mineral feel. Larger scale looks like a sea sponge.



REVERSED

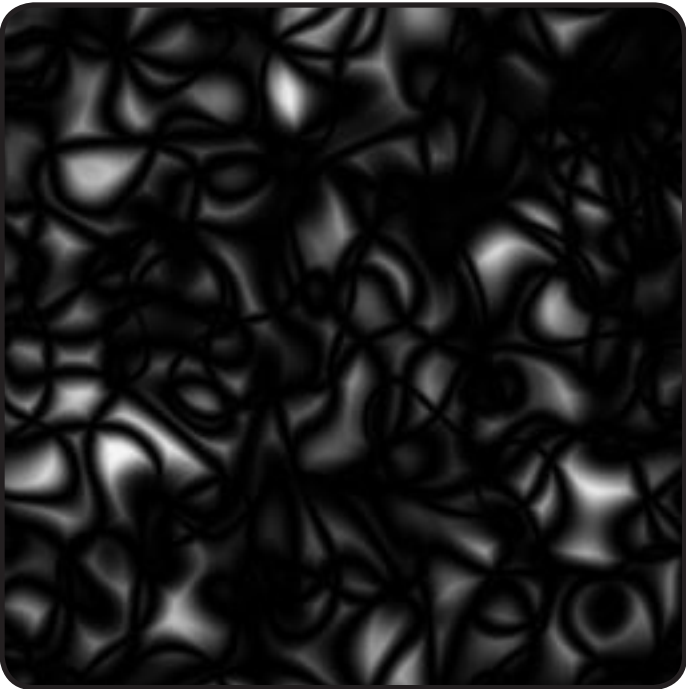


SCALE 300, HEIGHT 8



SCALE 600, HEIGHT 18





GRAYSCALE



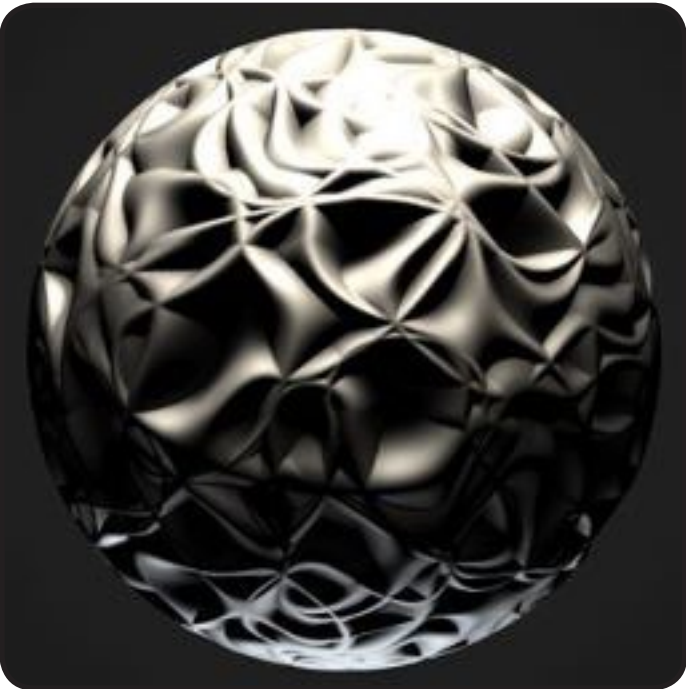
PLANAR



SCALE 50, HEIGHT 1

Hama is a little bit alien in feel. Sort of a more jagged, broken version of Dents. At small scales gives a nice random rough surface.

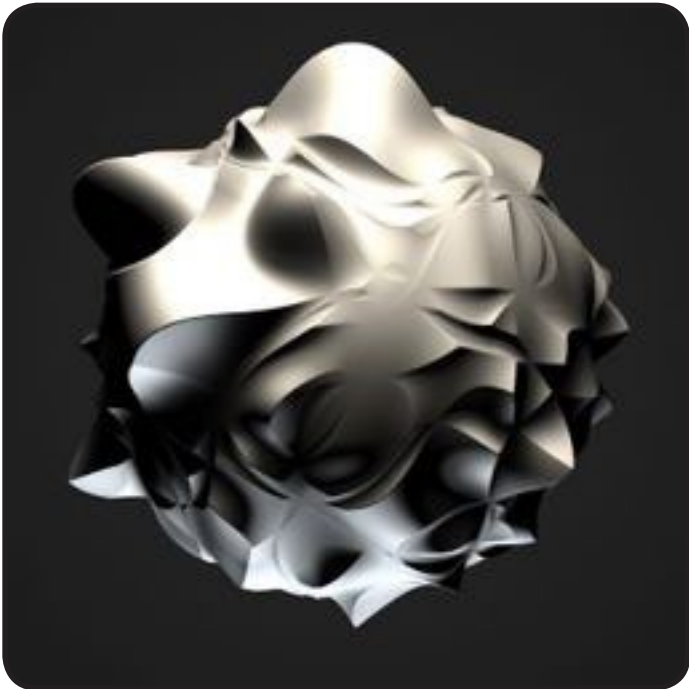
REVERSED



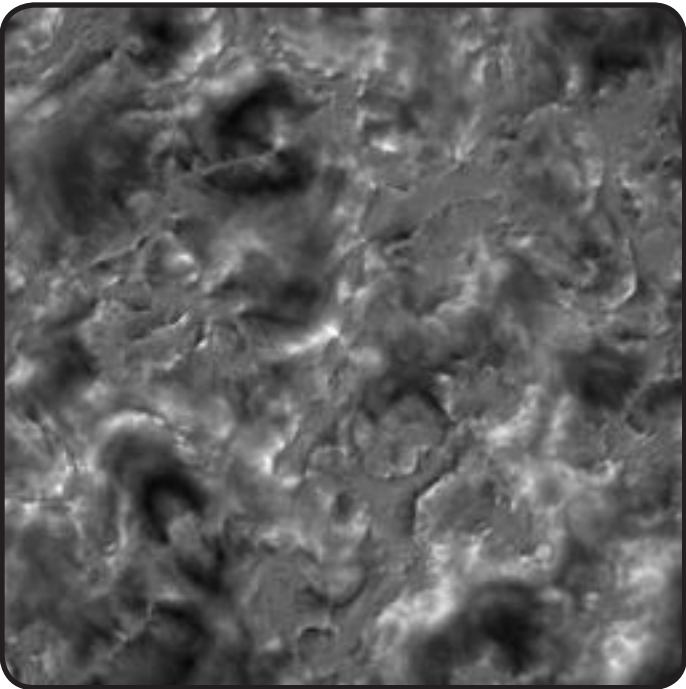
SCALE 350, HEIGHT 7



SCALE 700, HEIGHT 14







GRAYSCALE



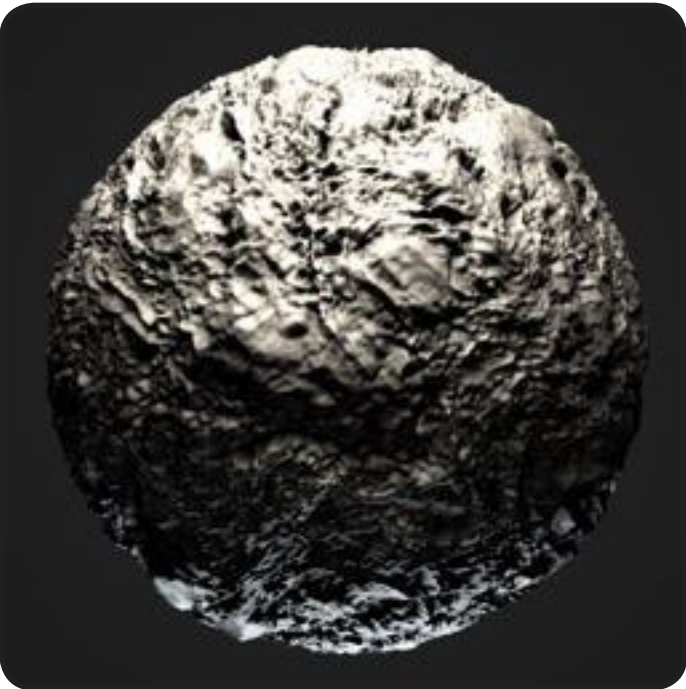
PLANAR



SCALE 50, HEIGHT 1

Luka has a nice combination of rough large areas broken up by smaller, more detailed spots, and even the occasional spike. Gives a good degree of complexity. Reversed has a nice rock face feel.

REVERSED



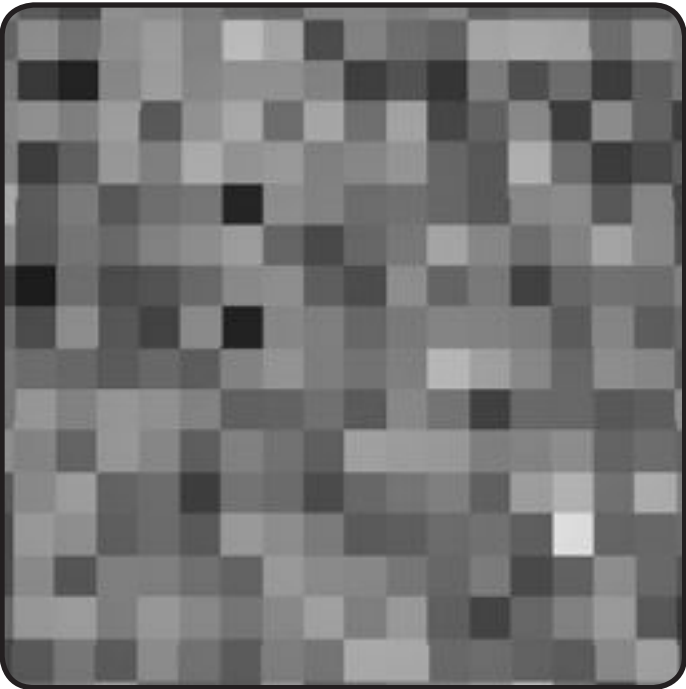
SCALE 350, HEIGHT 5



SCALE 700, HEIGHT 15



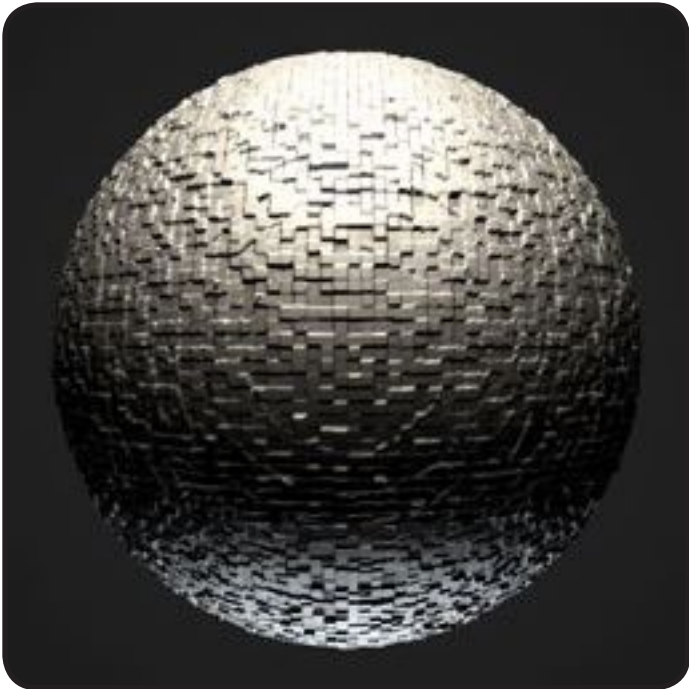




GRAYSCALE



PLANAR



SCALE 30, HEIGHT 2

Mod Noise is another cubic variation pattern like Cell Noise. In fact, I'm not really sure what the real difference is. It could be that Mod has a slightly less contrasty variation in values.

REVERSED



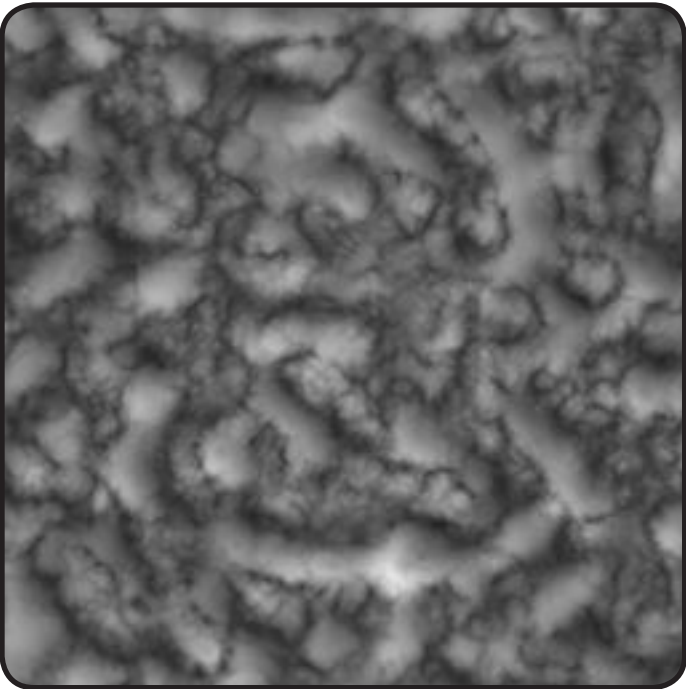
SCALE 150, HEIGHT 5



SCALE 400, HEIGHT 20



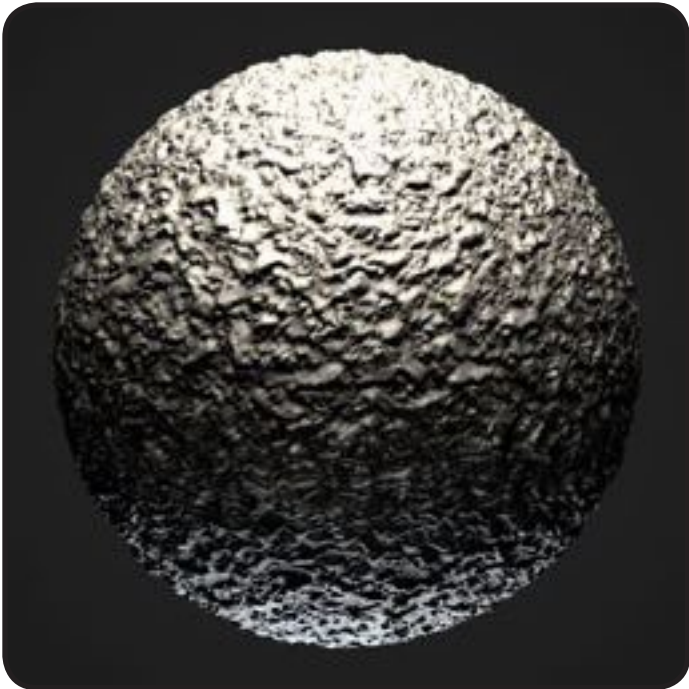




GRAYSCALE



PLANAR

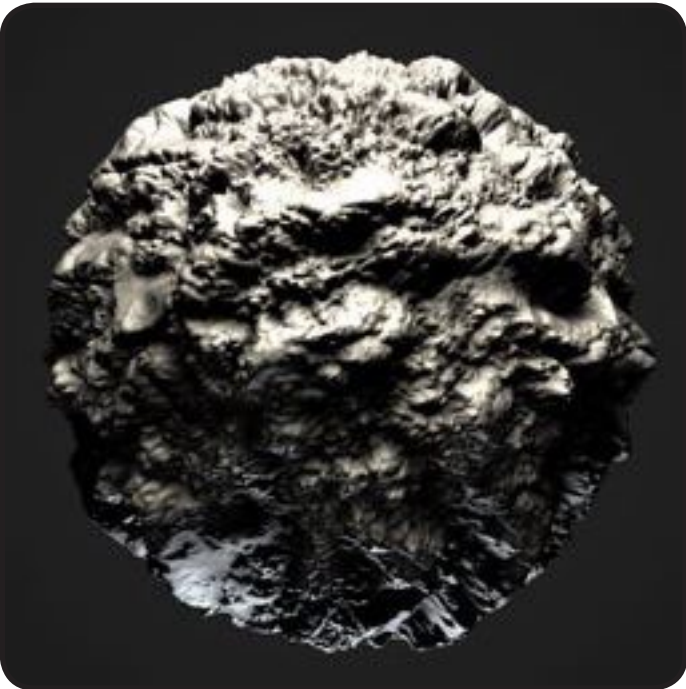


SCALE 50, HEIGHT 2

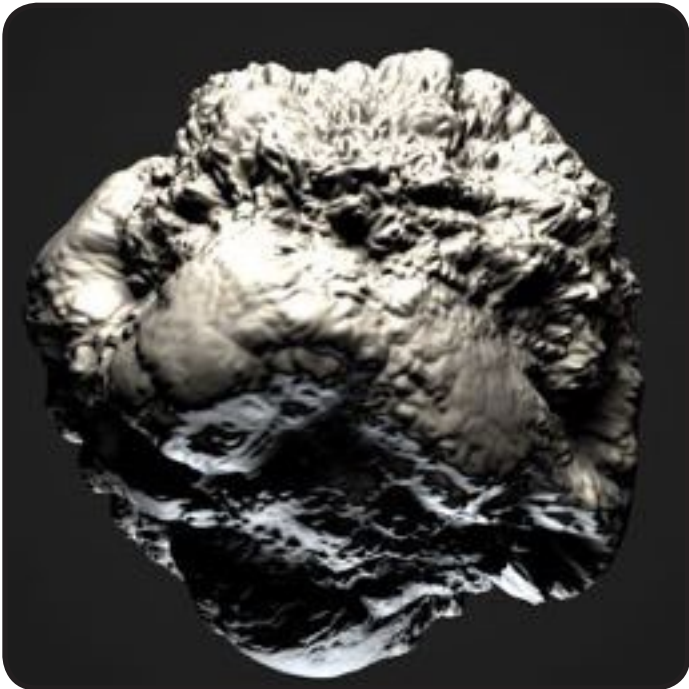
Naki has more of a wet feel to it, like mud or rough cement. It gets very interesting especially at larger scales, with a nice variation of scales.



REVERSED

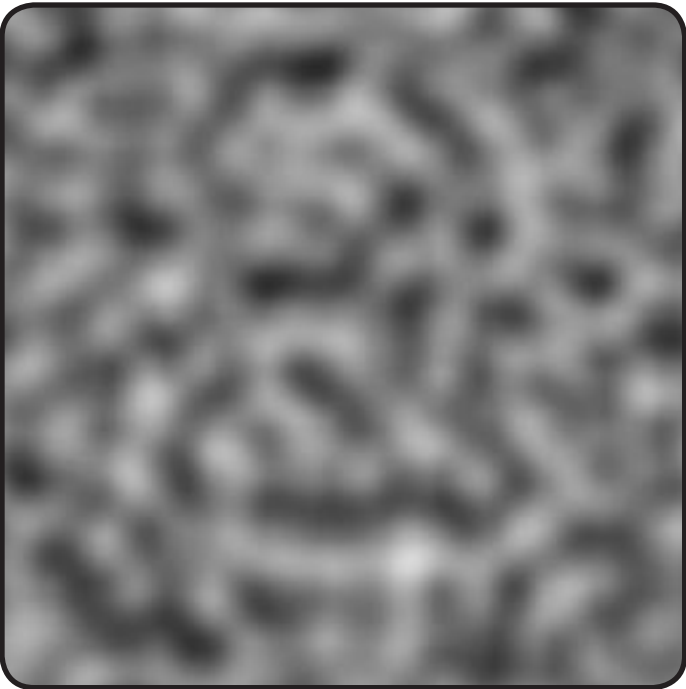


SCALE 200, HEIGHT 10



SCALE 500, HEIGHT 20

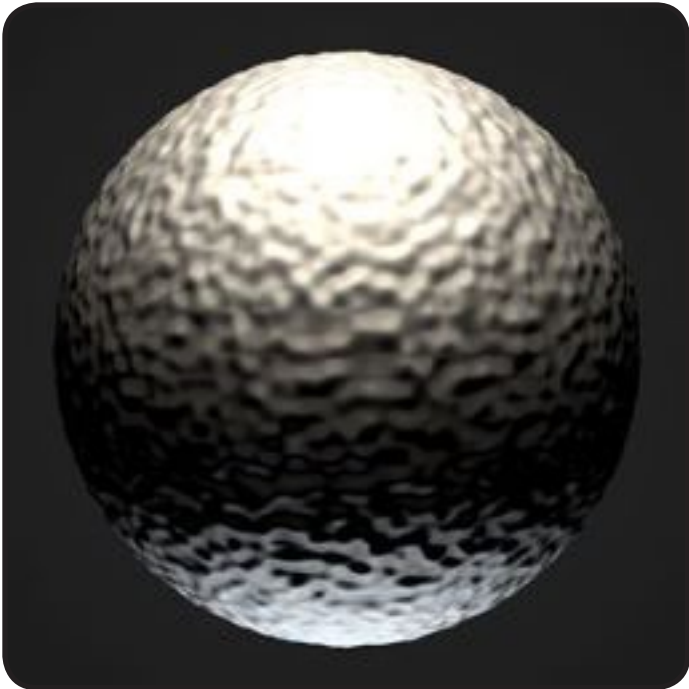




GRayscale

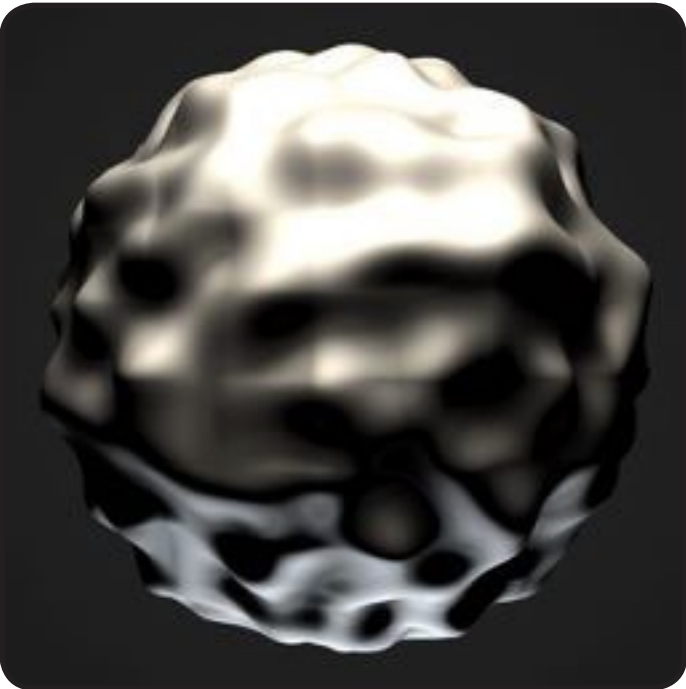


PLANAR

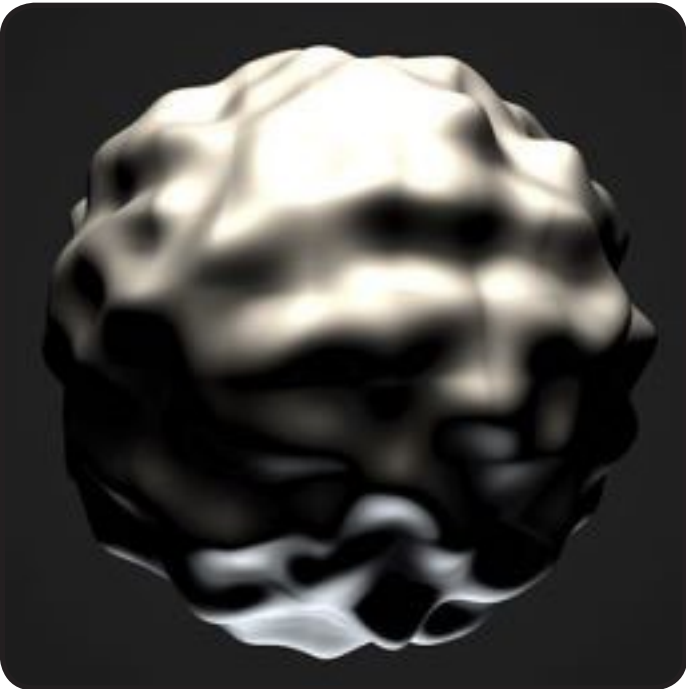


SCALE 50, HEIGHT 1

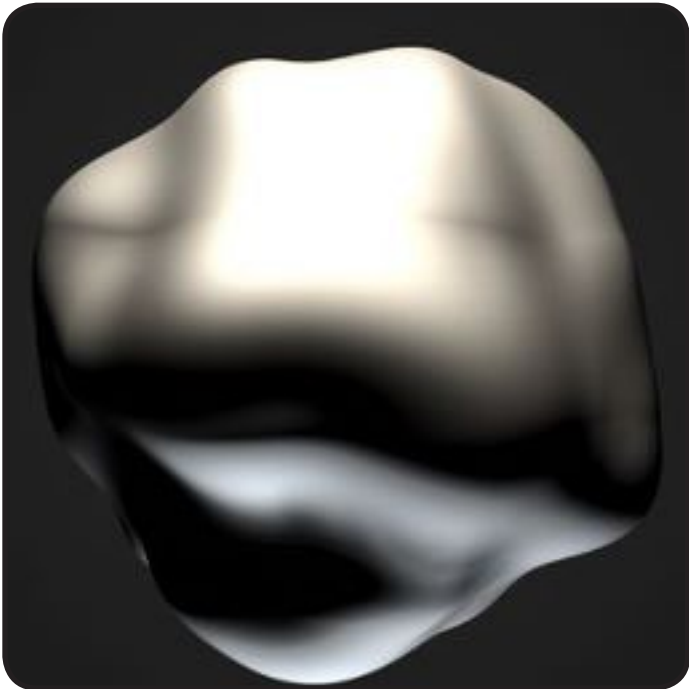
Noise is the generic (and default) texture you'll get when you first select noise as a texture in C4D. It is the softest overall, looking like a very out of focus random pattern, with no sharp detail or variations.



REVERSED

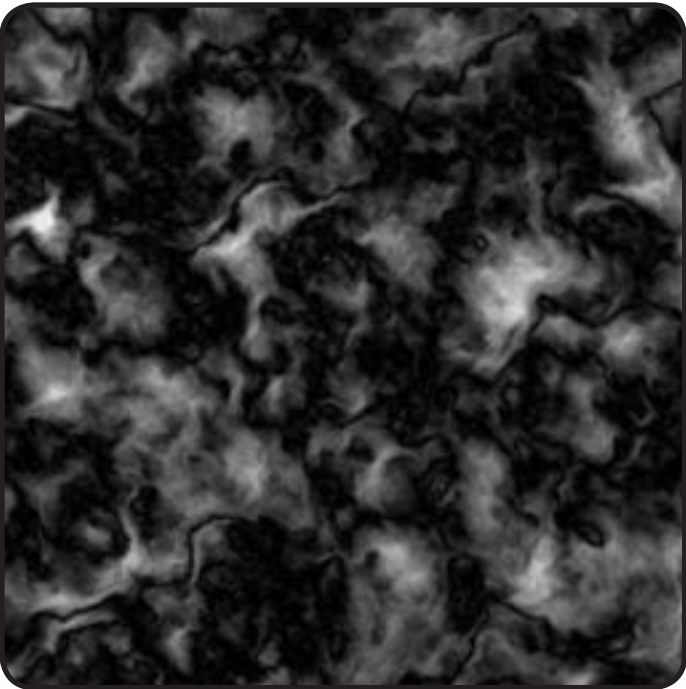


SCALE 200, HEIGHT 10



SCALE 500, HEIGHT 50

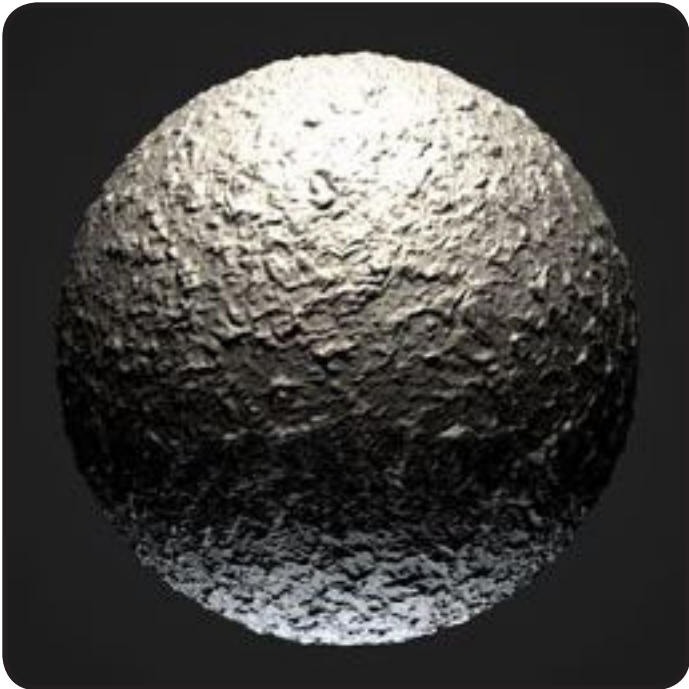




GRAYSCALE



PLANAR



SCALE 75, HEIGHT 1

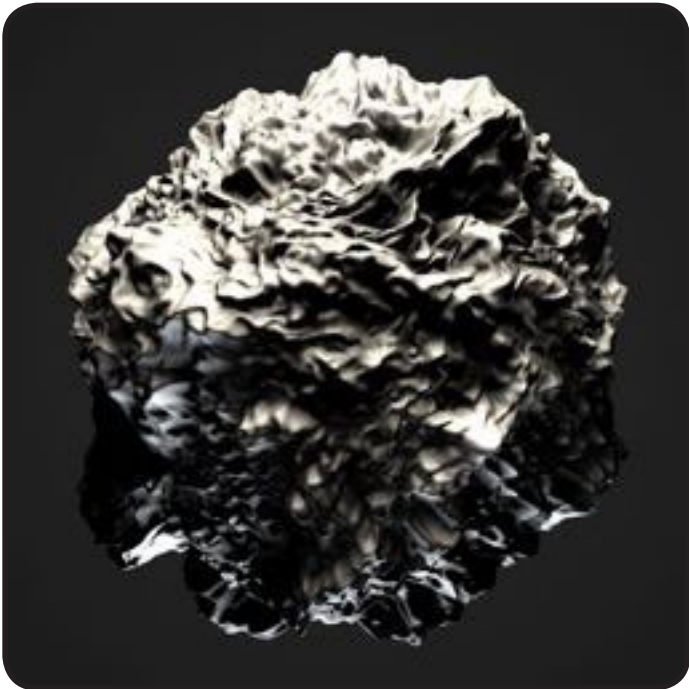
Nutous has a nice variation in levels of detail. A predominantly dark base with random light areas rising from it. Larger scale has a meteor-like feel.



REVERSED

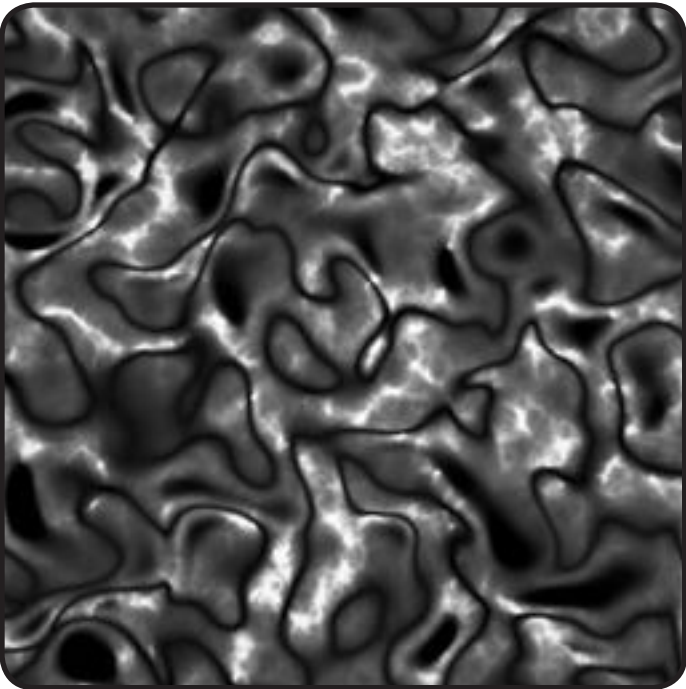


SCALE 300, HEIGHT 7

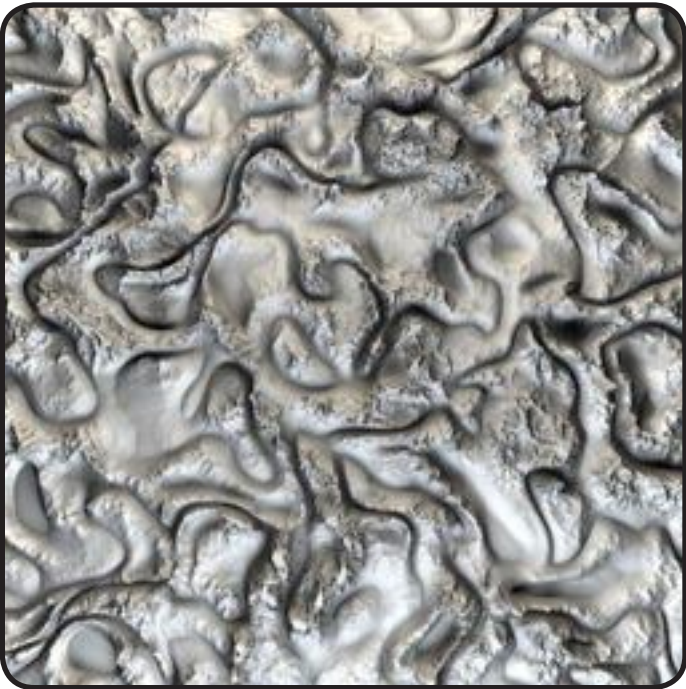


SCALE 600, HEIGHT 14





GRAYSCALE



PLANAR



SCALE 75, HEIGHT 1

Ober is kind of a cross between Cranal and Luka. Nice rough areas and peaks, but interspersed with flowing lines. When reversed, the lines become ridges along the outermost surface.

REVERSED



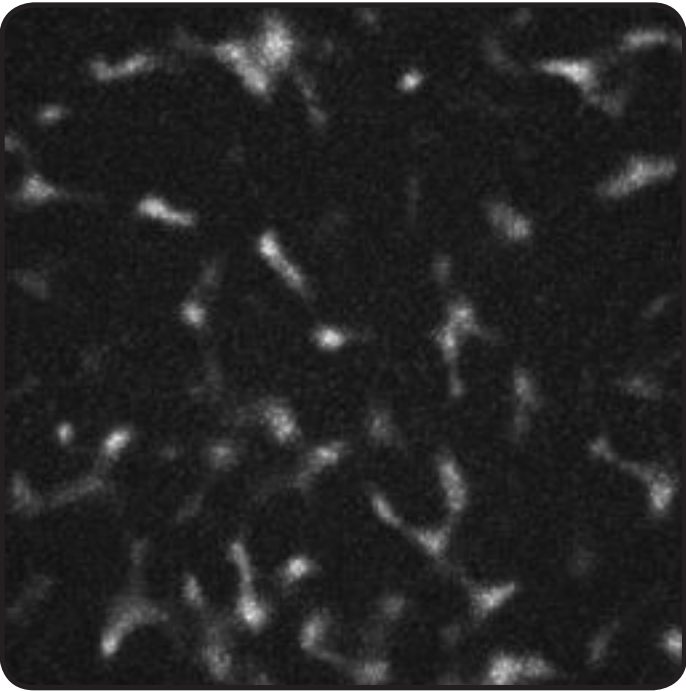
SCALE 300, HEIGHT 5



SCALE 600, HEIGHT 10







GRAYSCALE



PLANAR



SCALE 70, HEIGHT 1

Pezo is another texture with a predominantly dark base, with small intermittent white areas. Good when you want obvious peaks rising from a fairly level base. At large scales resembles pollen or other microscopic bits.

REVERSED



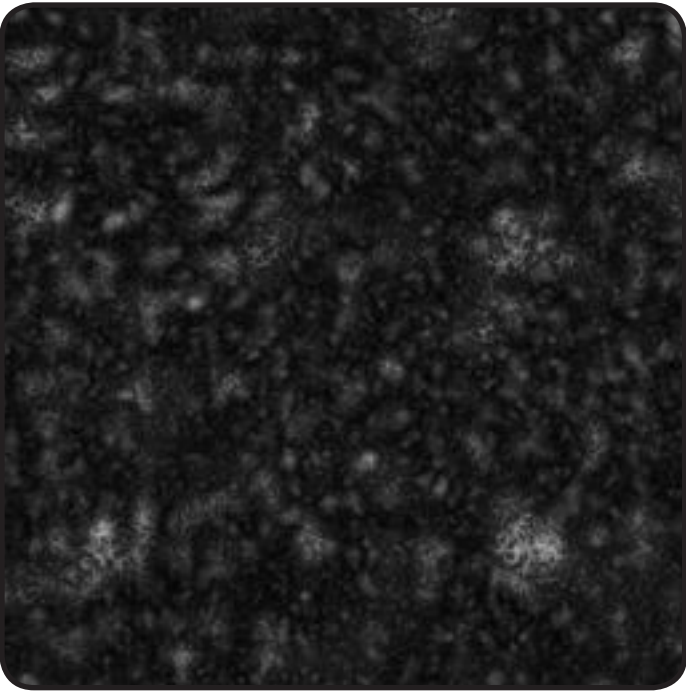
SCALE 250, HEIGHT 5



SCALE 500, HEIGHT 10



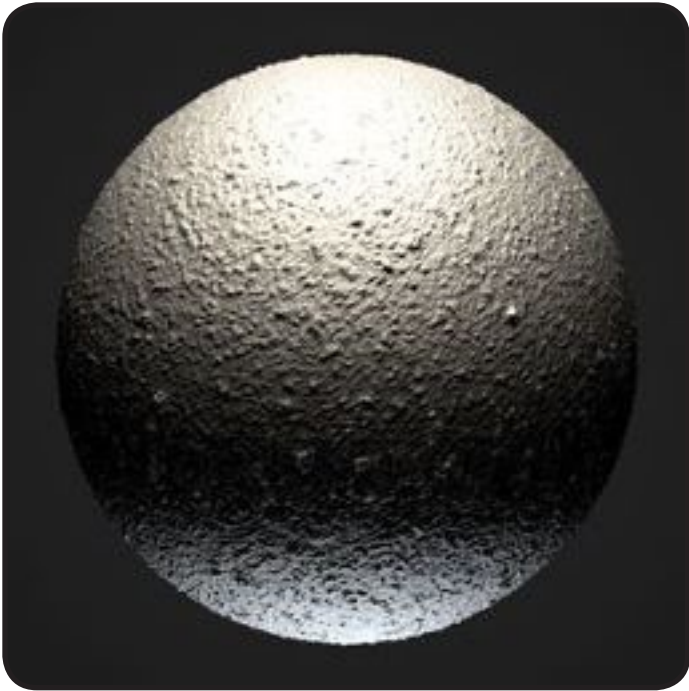




GRAYSCALE



PLANAR



SCALE 70, HEIGHT 1

Poxo has a lot of fine detail to it, on top of a nice varied larger pattern. Larger scales resemble a crystalline structure.



REVERSED

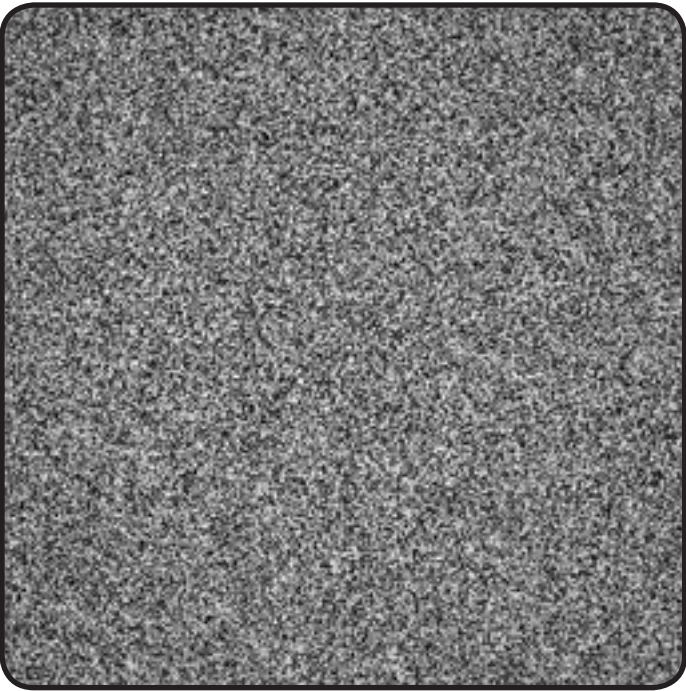


SCALE 300, HEIGHT 6

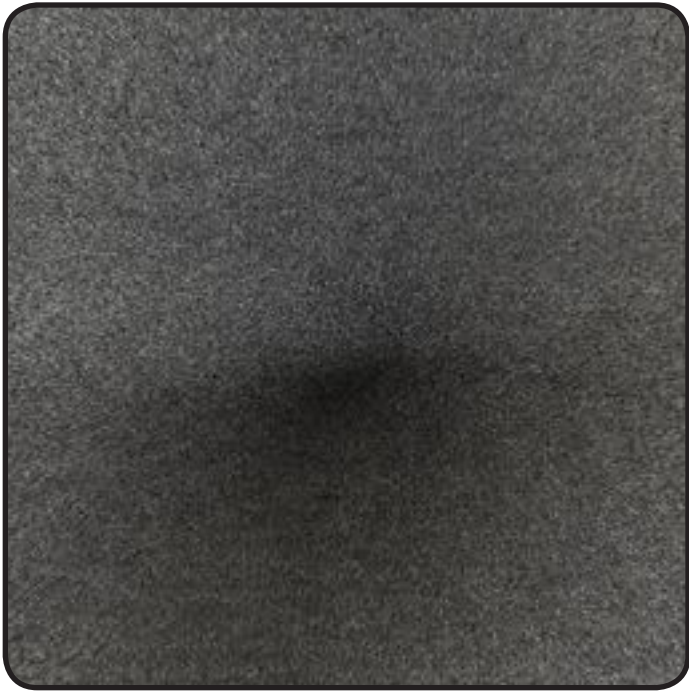


SCALE 600, HEIGHT 12





GRAYSCALE



PLANAR



SCALE 50, HEIGHT 5

Random is a strange creature. It doesn't seem to be affected by scale. That's not a typo below, the global scale was set to 2000, but it's not much different than at 250. Good when you need the finest noise possible. Could probably be used for static or white noise on a TV screen when animated.

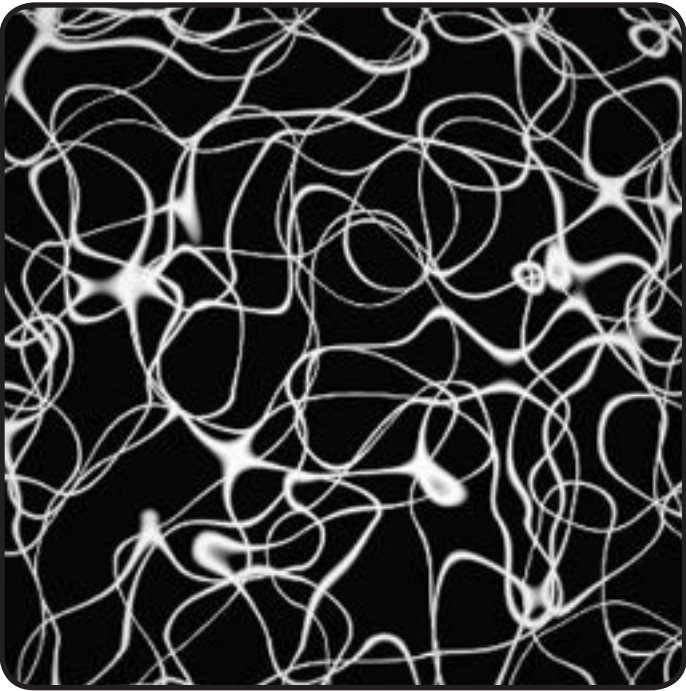
REVERSED

SCALE 250, HEIGHT 5

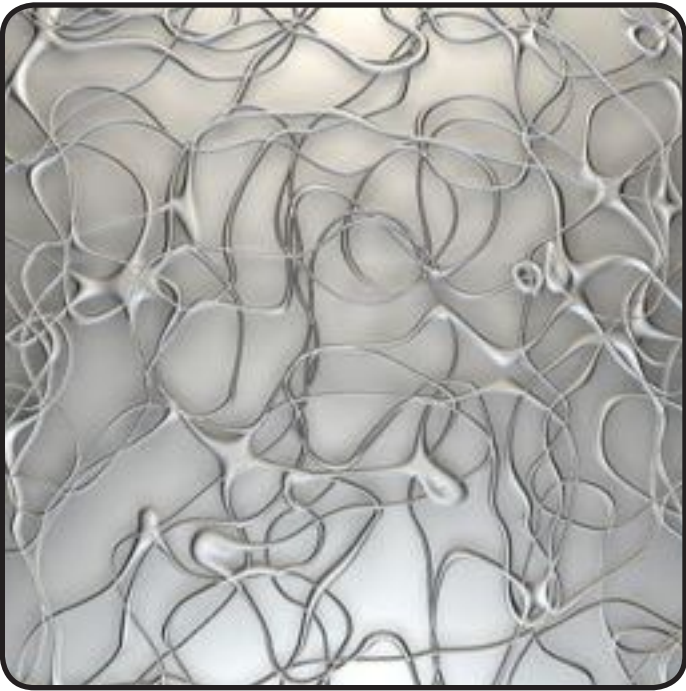
SCALE 2000, HEIGHT 12







GRAYSCALE



PLANAR



SCALE 100, HEIGHT 2

Sema has a very distinct pattern, like paint dripping from a brush or melted plastic. Also has a somewhat alien feel to it.

REVERSED



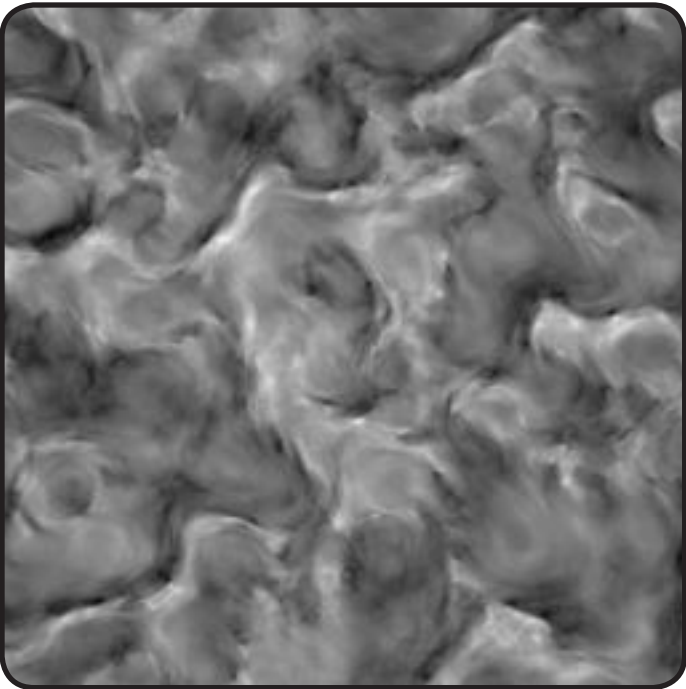
SCALE 450, HEIGHT 1



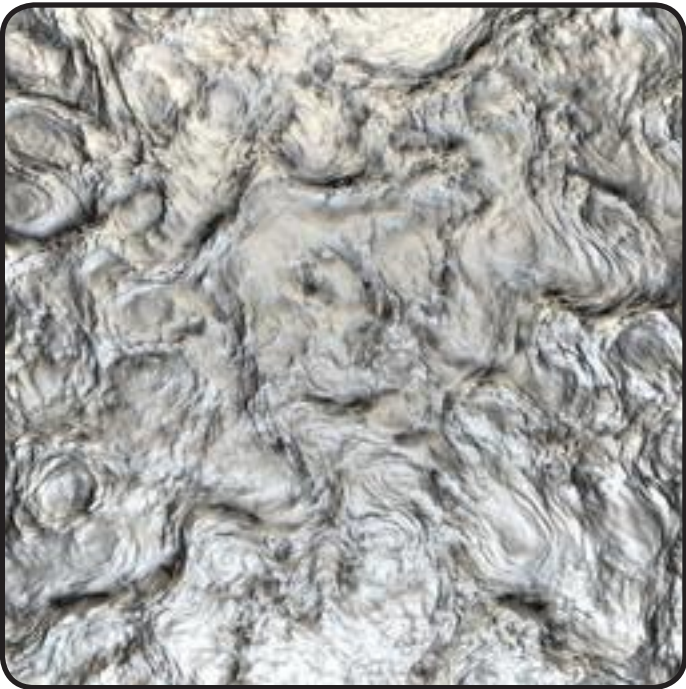
SCALE 1000, HEIGHT 3



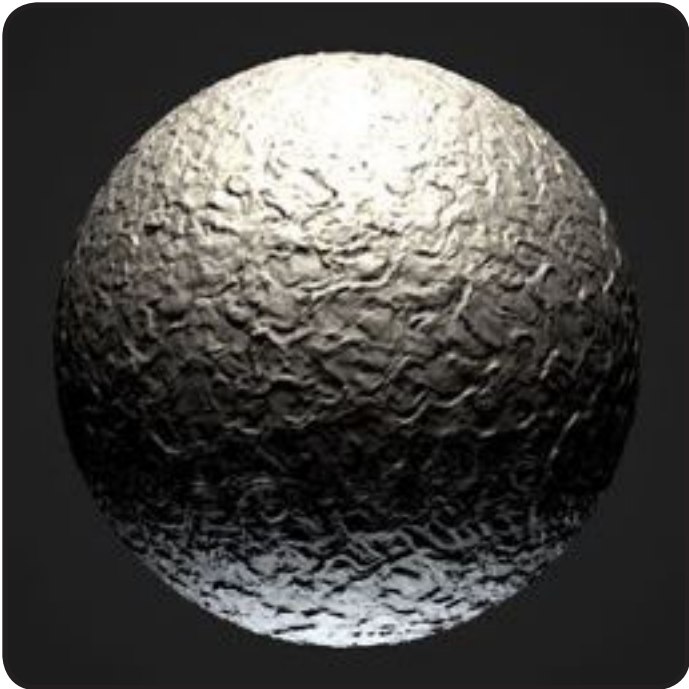




GRAYSCALE

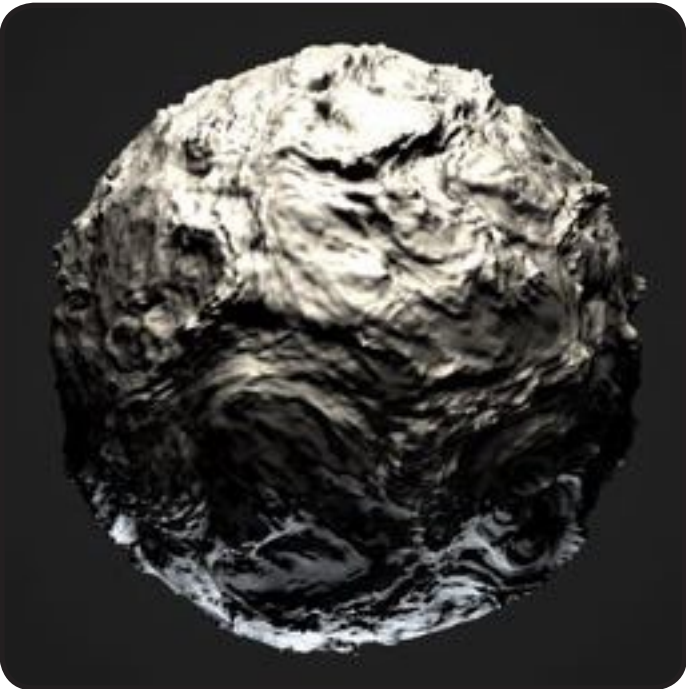


PLANAR

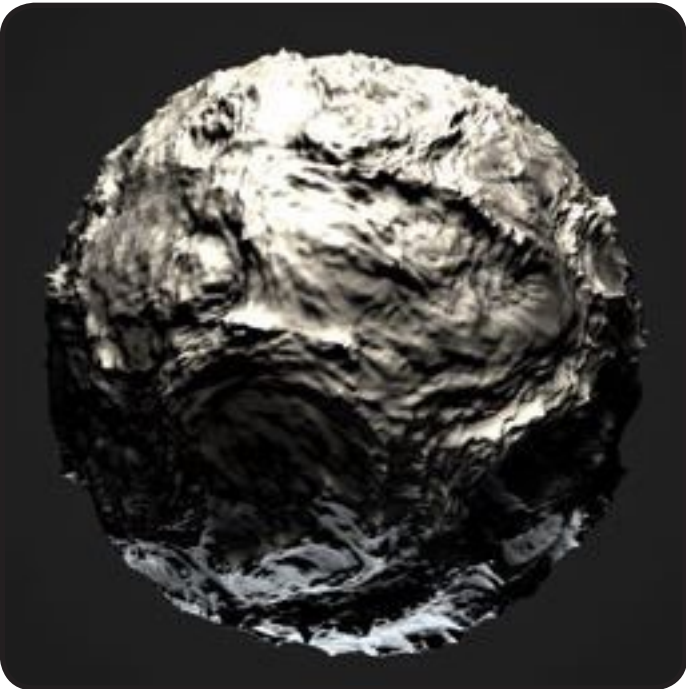


SCALE 75, HEIGHT 1

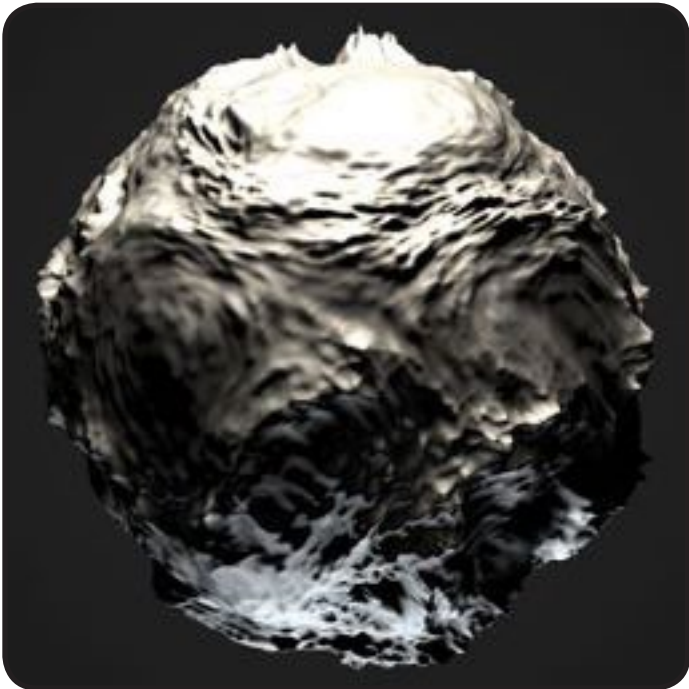
Stupl has a nice flowing feel to it, almost like cooled lava flows. The smaller scale looks a little like smeared wax.



REVERSED



SCALE 300, HEIGHT 6

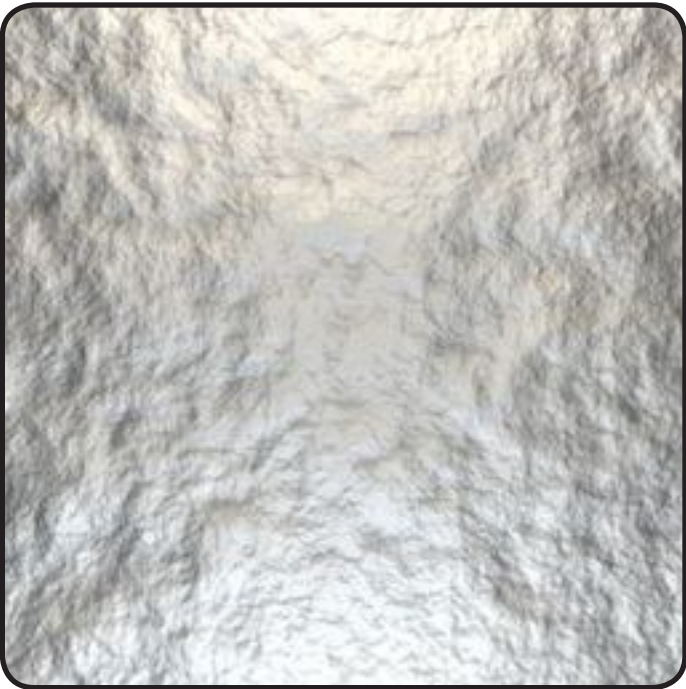


SCALE 600, HEIGHT 11





GRAYSCALE

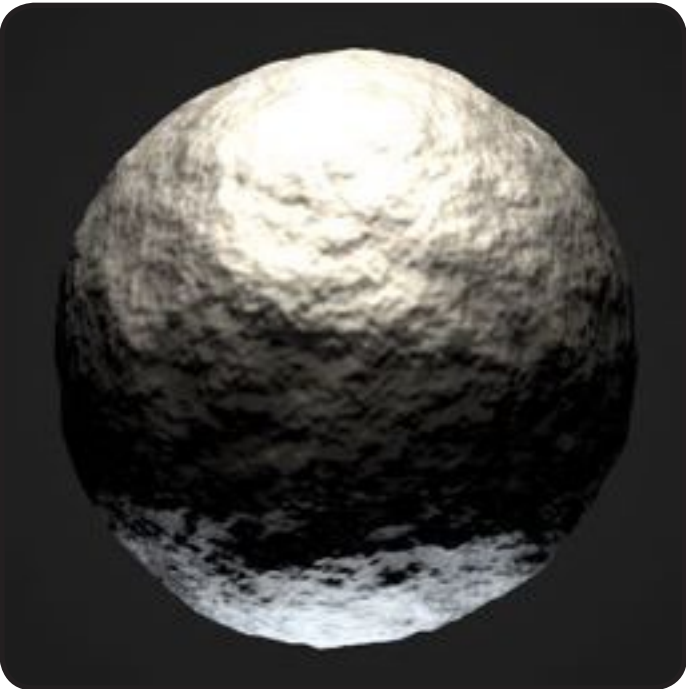


PLANAR

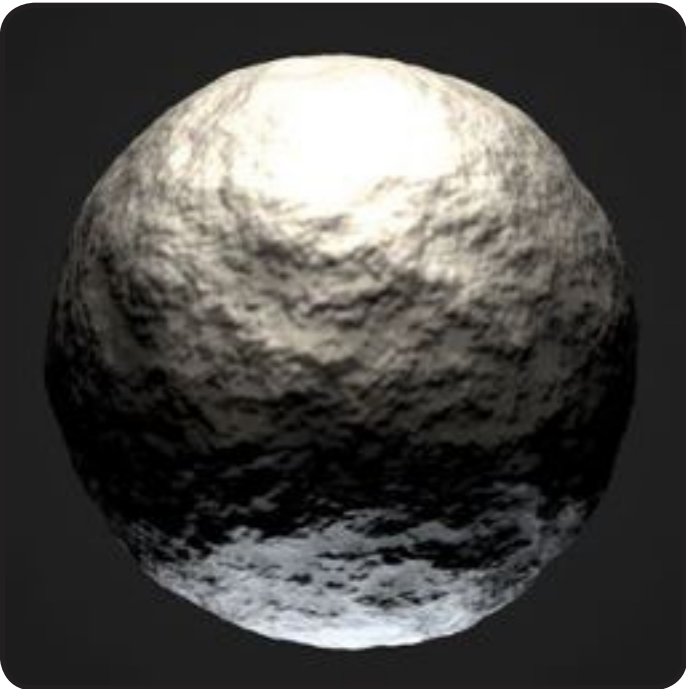


SCALE 50, HEIGHT 5

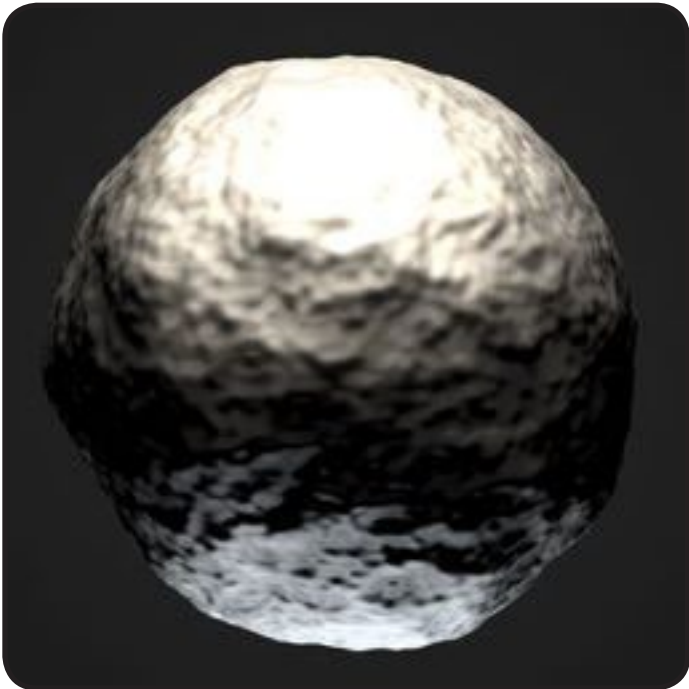
Turbulence is one of the more subtle noise patterns, but still has some nice detail to it. It can be nice when you want to add just a bit of detail. The smaller scale looks a little like skin or leather.



REVERSED



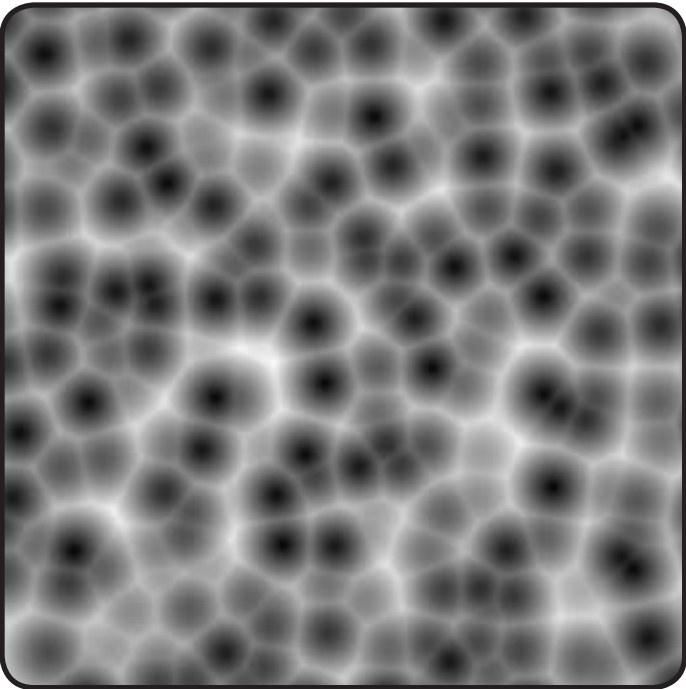
SCALE 300, HEIGHT 5



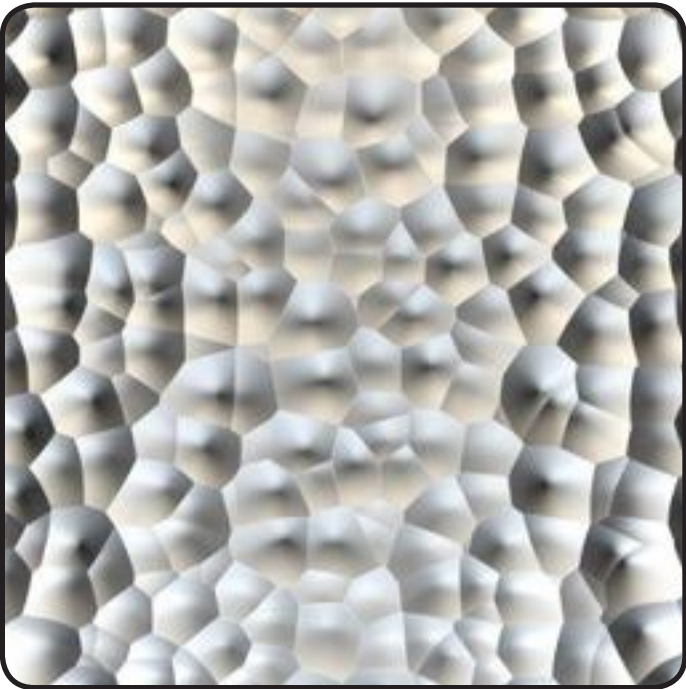
SCALE 600, HEIGHT 12

# TURBULENCE

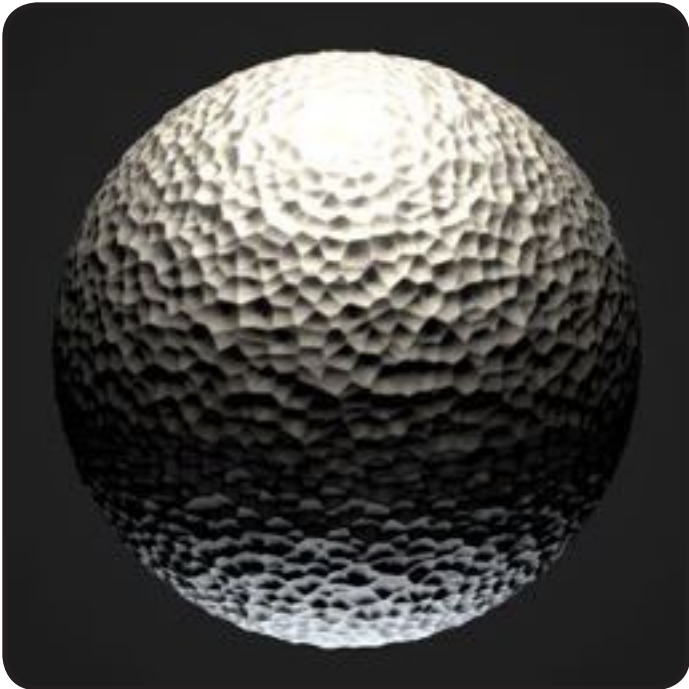




GRAYSCALE



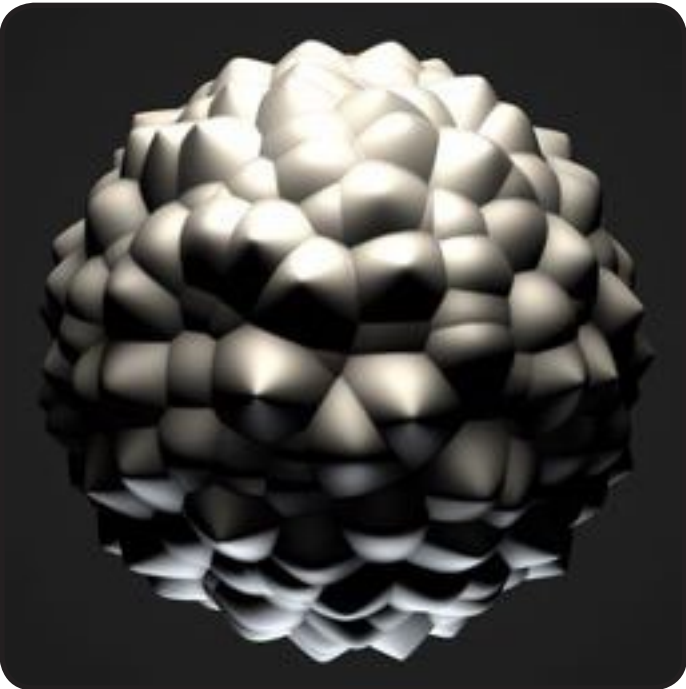
PLANAR



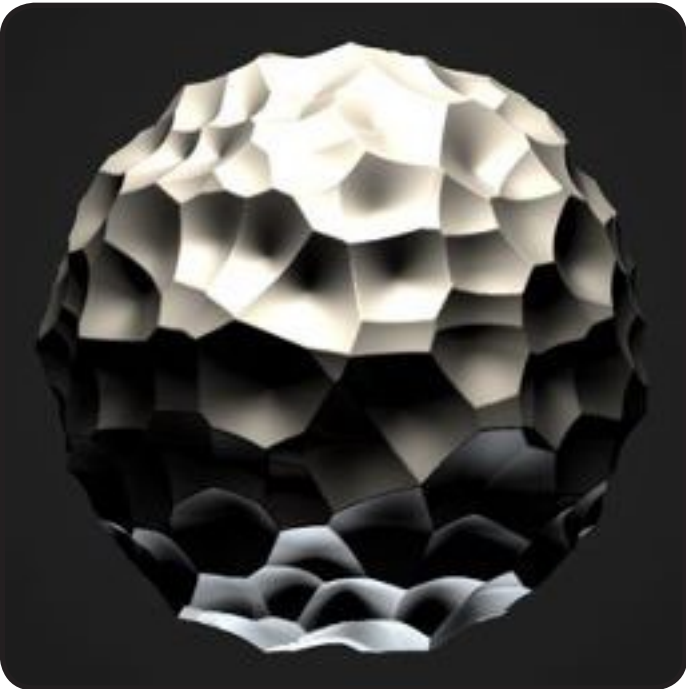
SCALE 50, HEIGHT 1

Voronoi 1 is the most basic of the Voronoi patterns, and has a very chiseled look. Reversed it looks like some sort of fruit or seedpod.

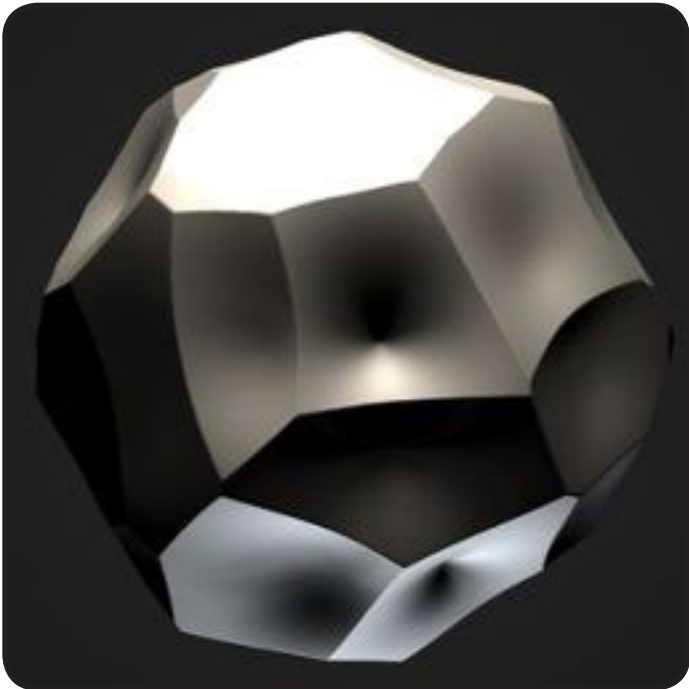
REVERSED



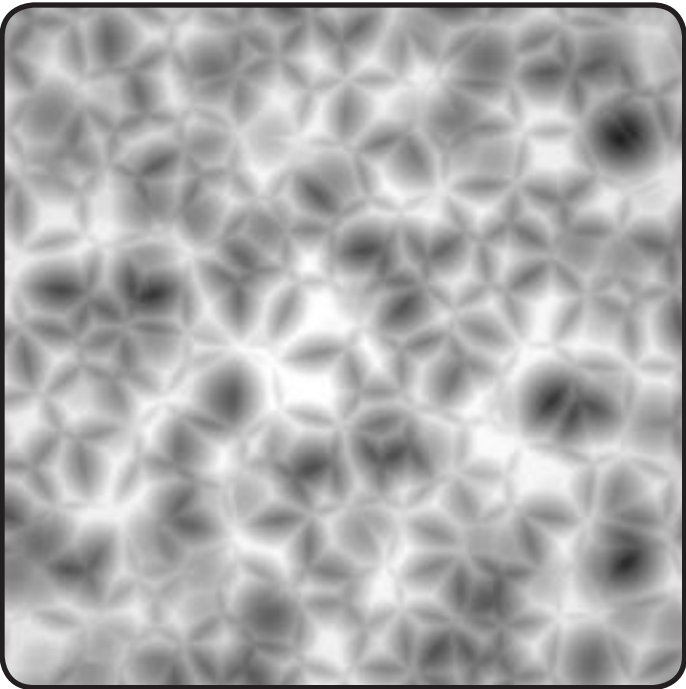
SCALE 200, HEIGHT 6



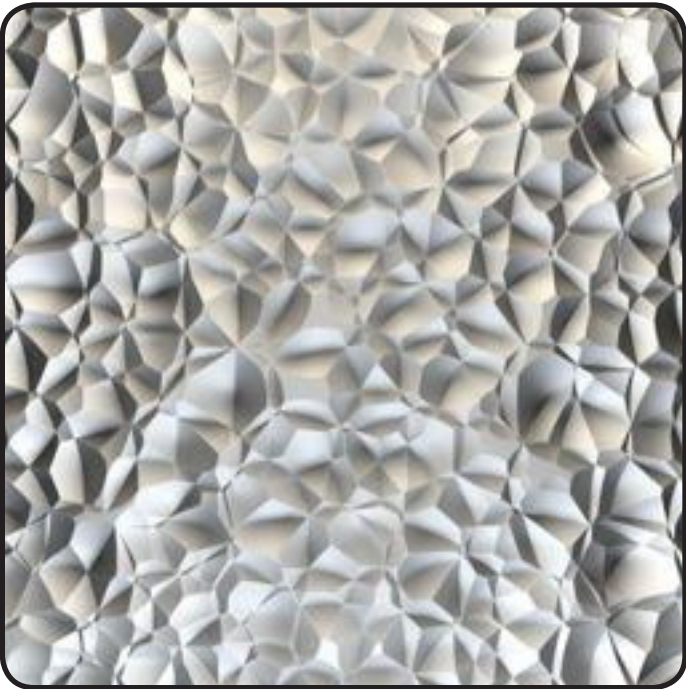
SCALE 500, HEIGHT 12



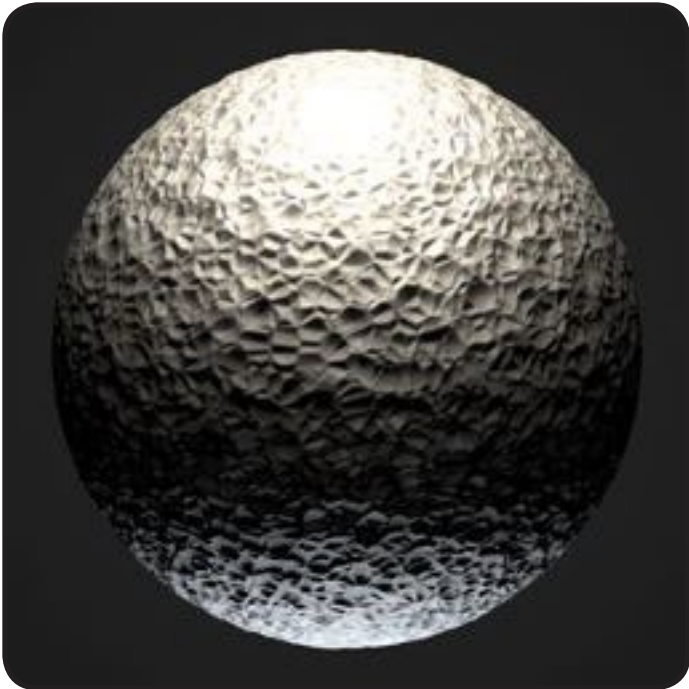




GRAYSCALE

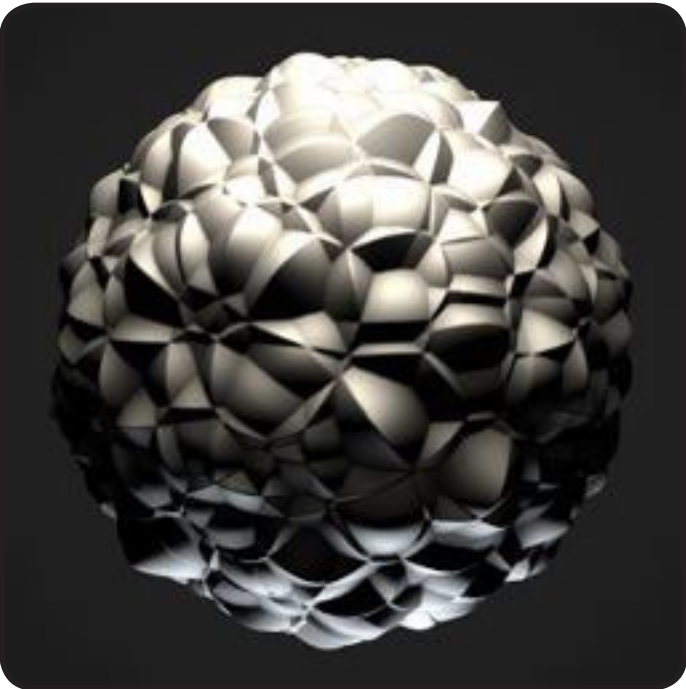


PLANAR

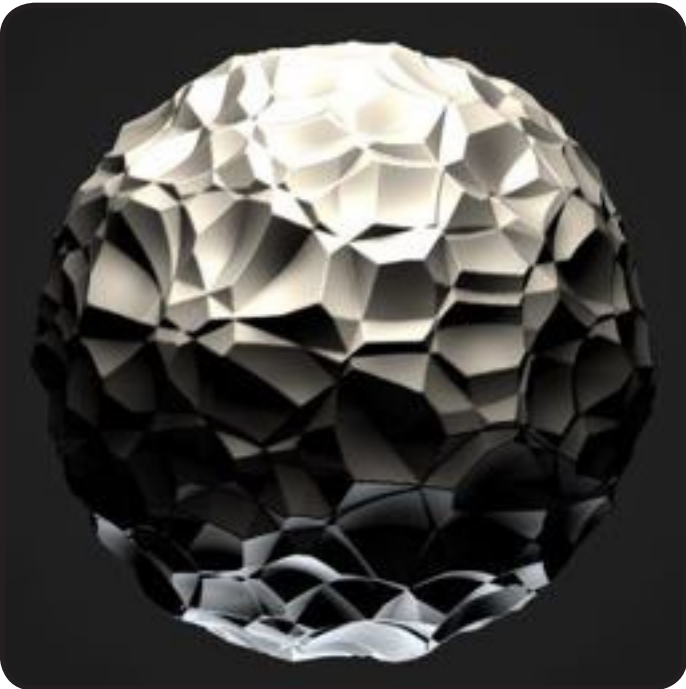


SCALE 50, HEIGHT 1

Voronoi 2 has an additional secondary pattern for more complexity.  
Has sort of a fractured cellular look.



REVERSED

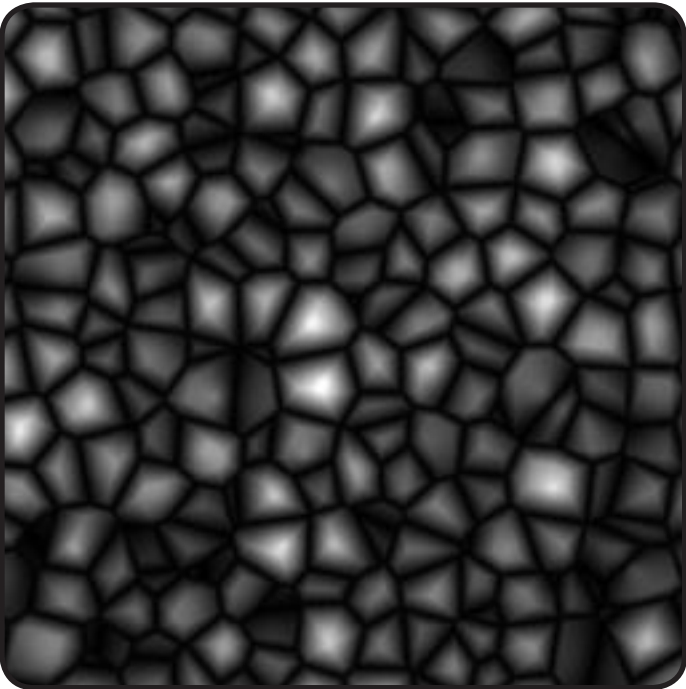


SCALE 200, HEIGHT 6



SCALE 500, HEIGHT 12

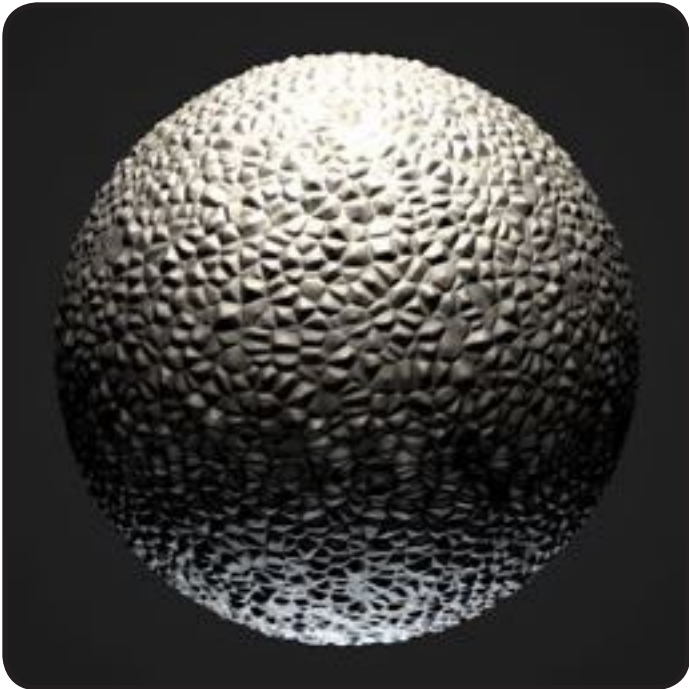




GRAYSCALE



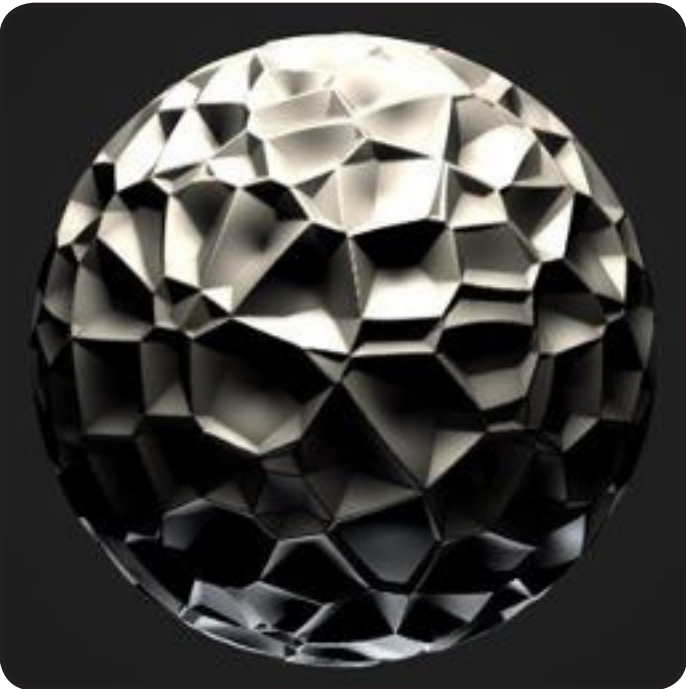
PLANAR



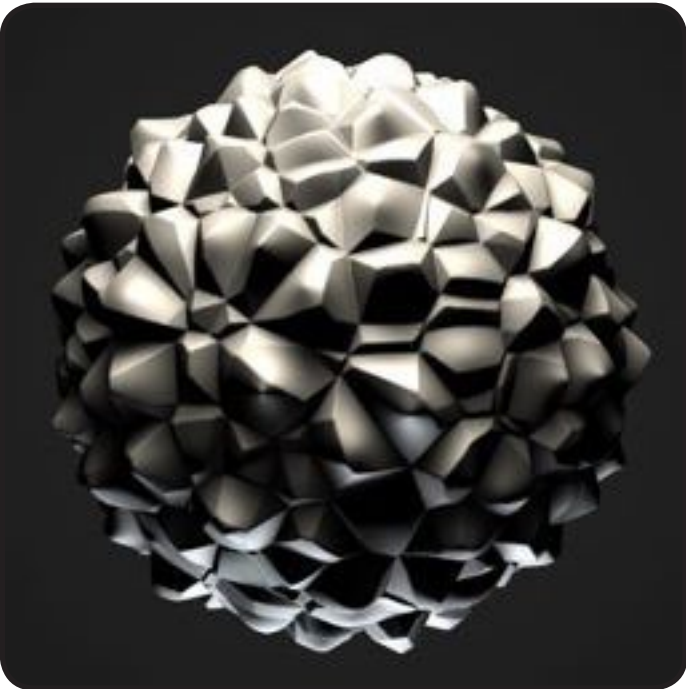
SCALE 50, HEIGHT 1

Voronoi 3 is a reversal of Voronoi 1, and has a higher contrast pattern with wider lines. The smaller scale looks like a concrete/aggregate surface. At a lower height setting, could resemble cobblestone.

REVERSED



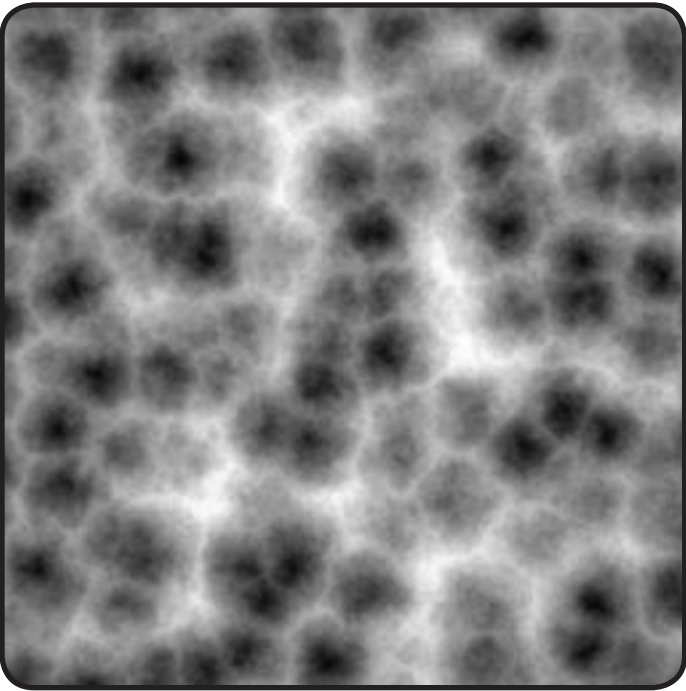
SCALE 200, HEIGHT 6



SCALE 500, HEIGHT 12







GRAYSCALE



PLANAR



SCALE 60, HEIGHT 1

Displaced Voronoi uses the basic Voronoi pattern, but adds an additional, smaller noise pattern to break it up. There's a sort of chiseled or hammered look to the surface. Could be used for ice or rock.



REVERSED



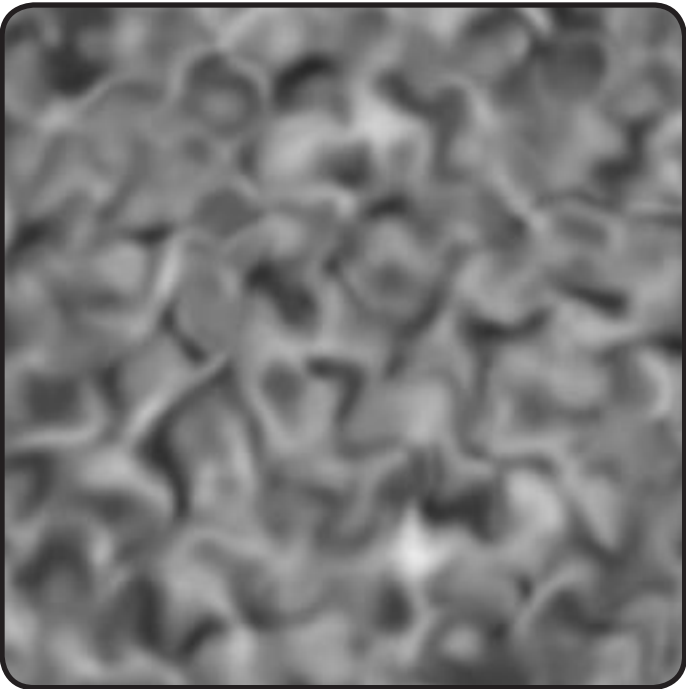
SCALE 250, HEIGHT 4



SCALE 500, HEIGHT 10

DISPLACED VORONOI

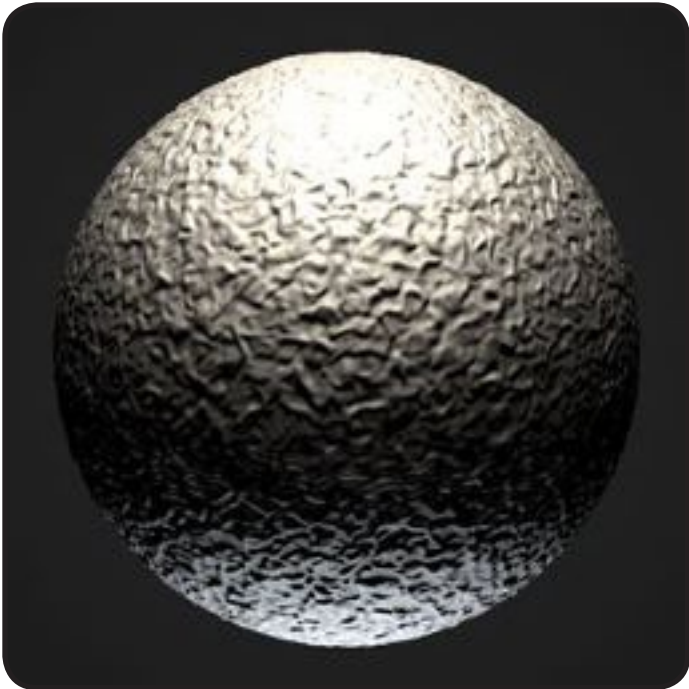




GRAYSCALE

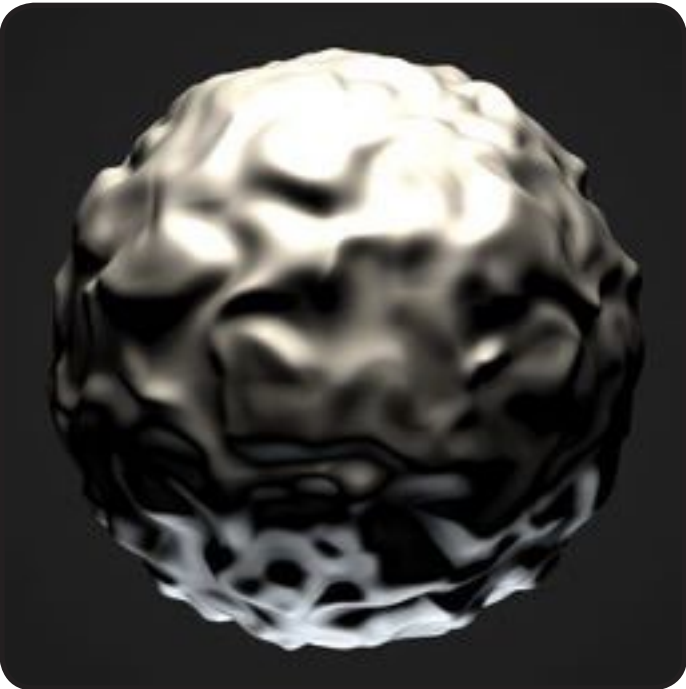


PLANAR

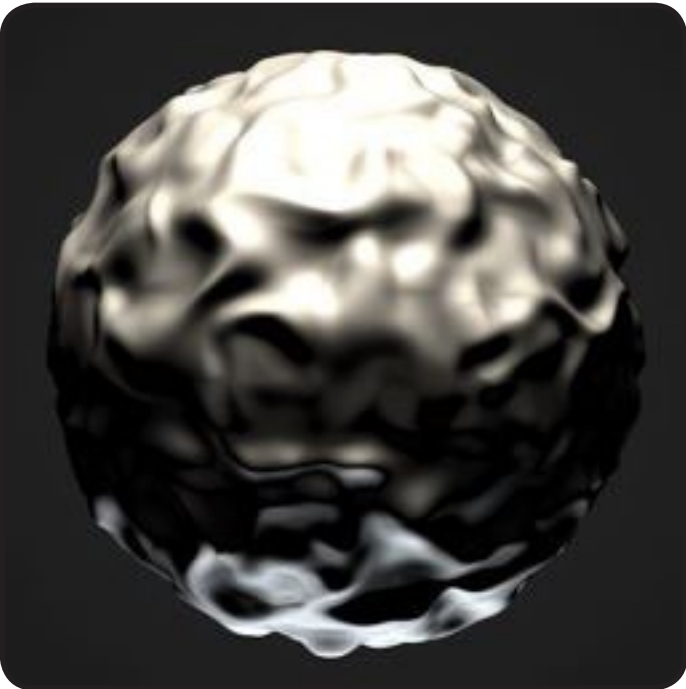


SCALE 40, HEIGHT 1

VL Noise is a bit like the default Noise that's been stirred up a bit.  
A softer overall effect than some, without strong sharp details, but  
more randomness than regular Noise.



REVERSED

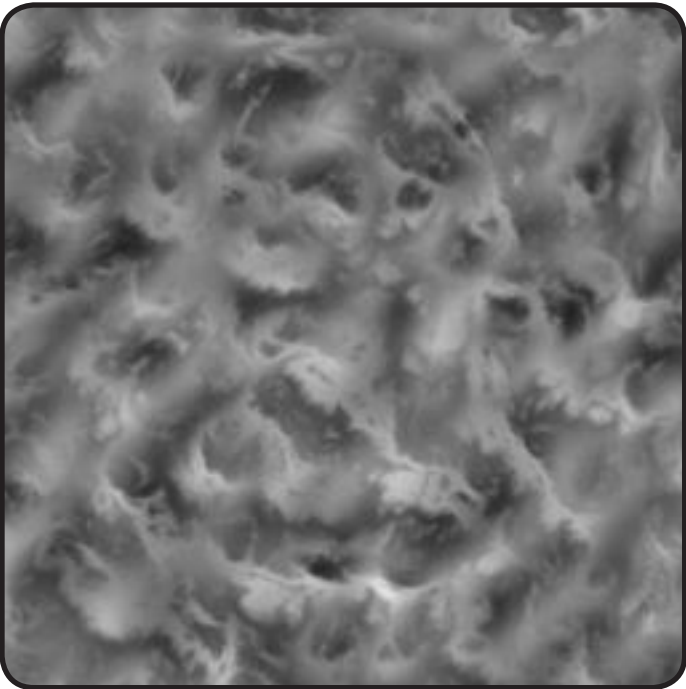


SCALE 200, HEIGHT 6



SCALE 400, HEIGHT 14

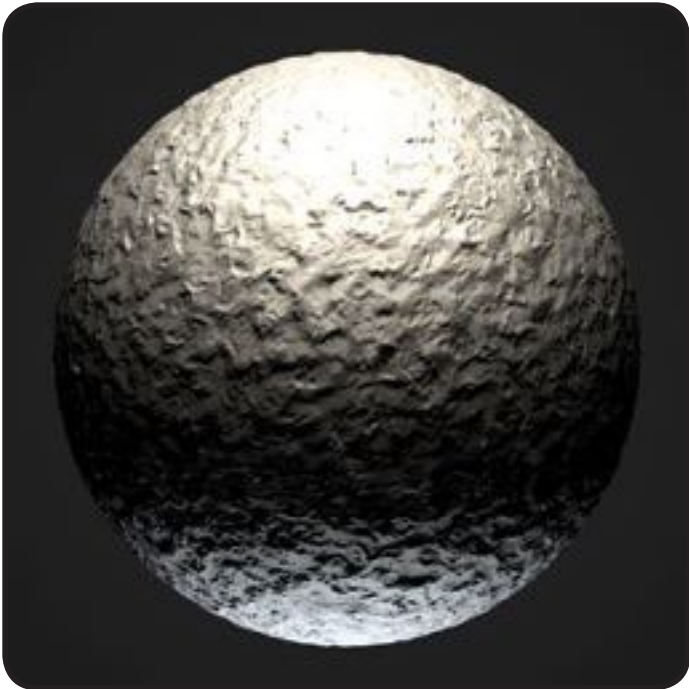




GRAYSCALE



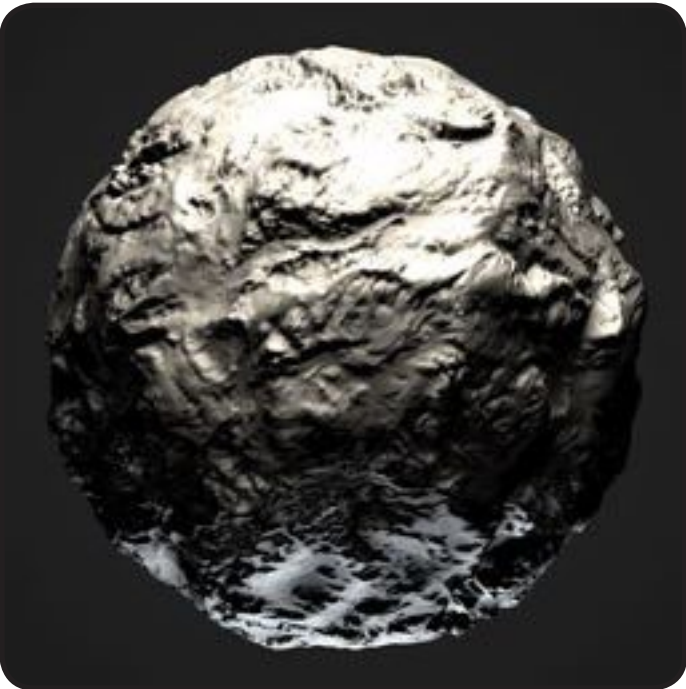
PLANAR



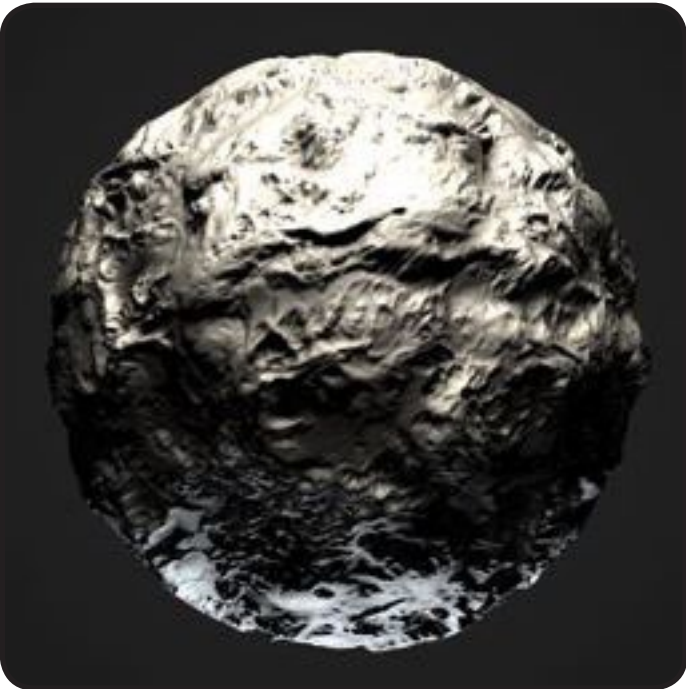
SCALE 50, HEIGHT 1

Wavy Turbulence has what seems like an underlying soft random pattern overlaid with harder random peaks. Has a nice varied organic feel to it. Larger scales get particularly interesting.

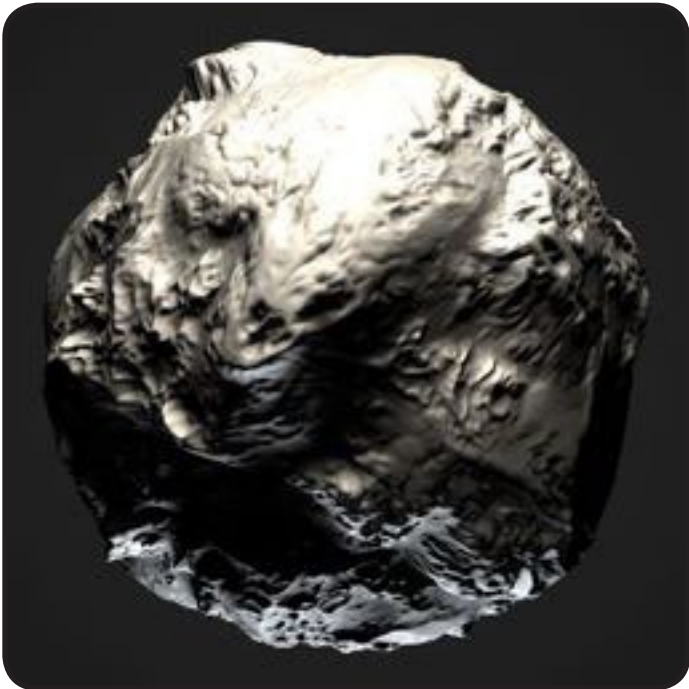
REVERSED



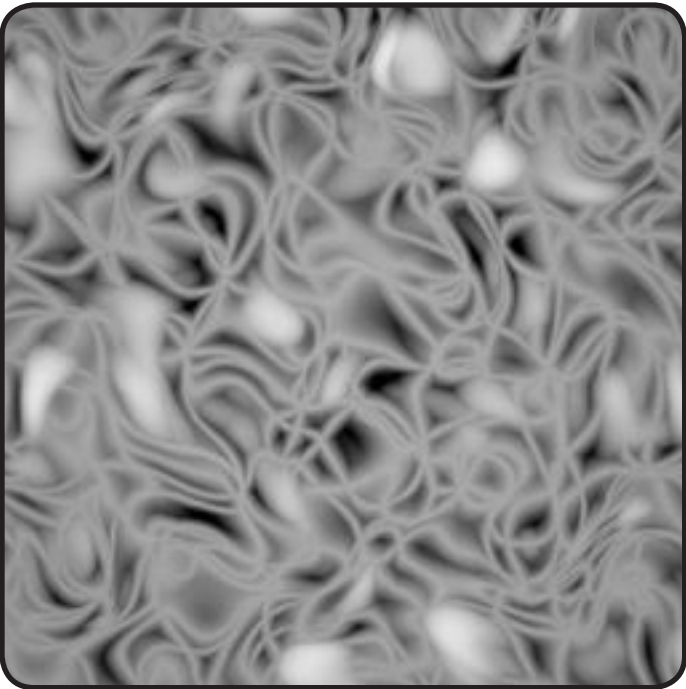
SCALE 200, HEIGHT 6



SCALE 450, HEIGHT 16







GRAYSCALE



PLANAR



SCALE 100, HEIGHT 1

Last but not least, Zada looks like a cross between Sema and Cranal. The combination has an odd alien feel to it, with twisting organic shapes. Reversing it brings out some nice sharp peaks.

REVERSED



SCALE 400, HEIGHT 8



SCALE 800, HEIGHT 16

