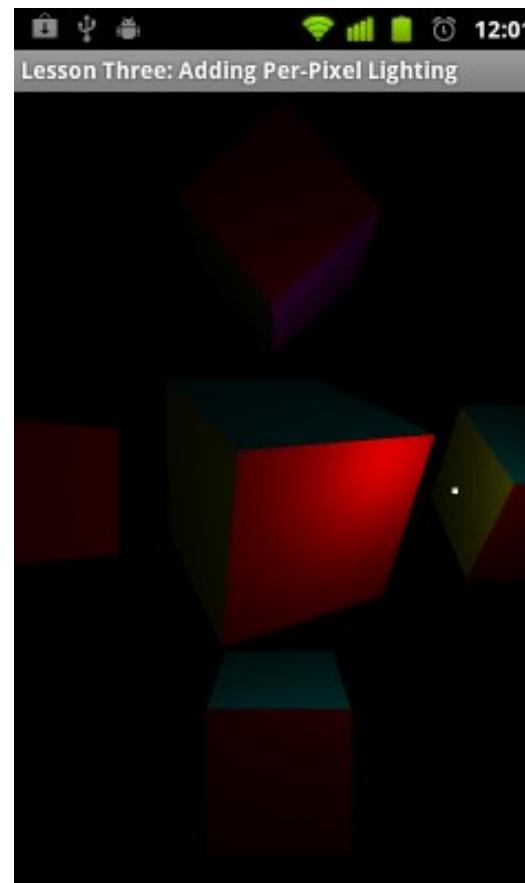


Programming

- 2. Render several 3D models with more than two types of lights and various materials (textures)



Context :

This “project” was in fact just an assignment worth 2.5% of the course, you can see the enoncee on the first page, the implementation was totally free.

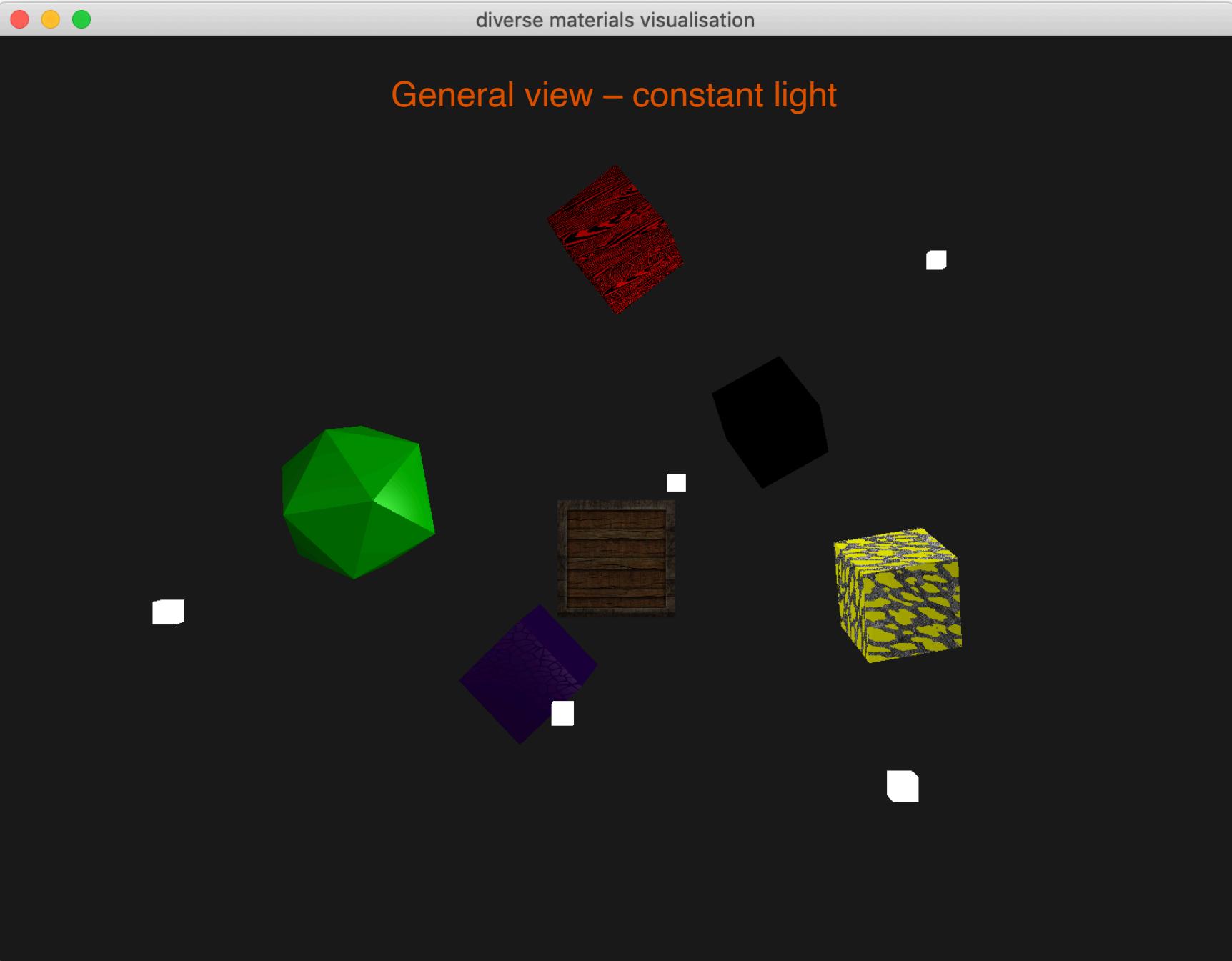
How to use the program :

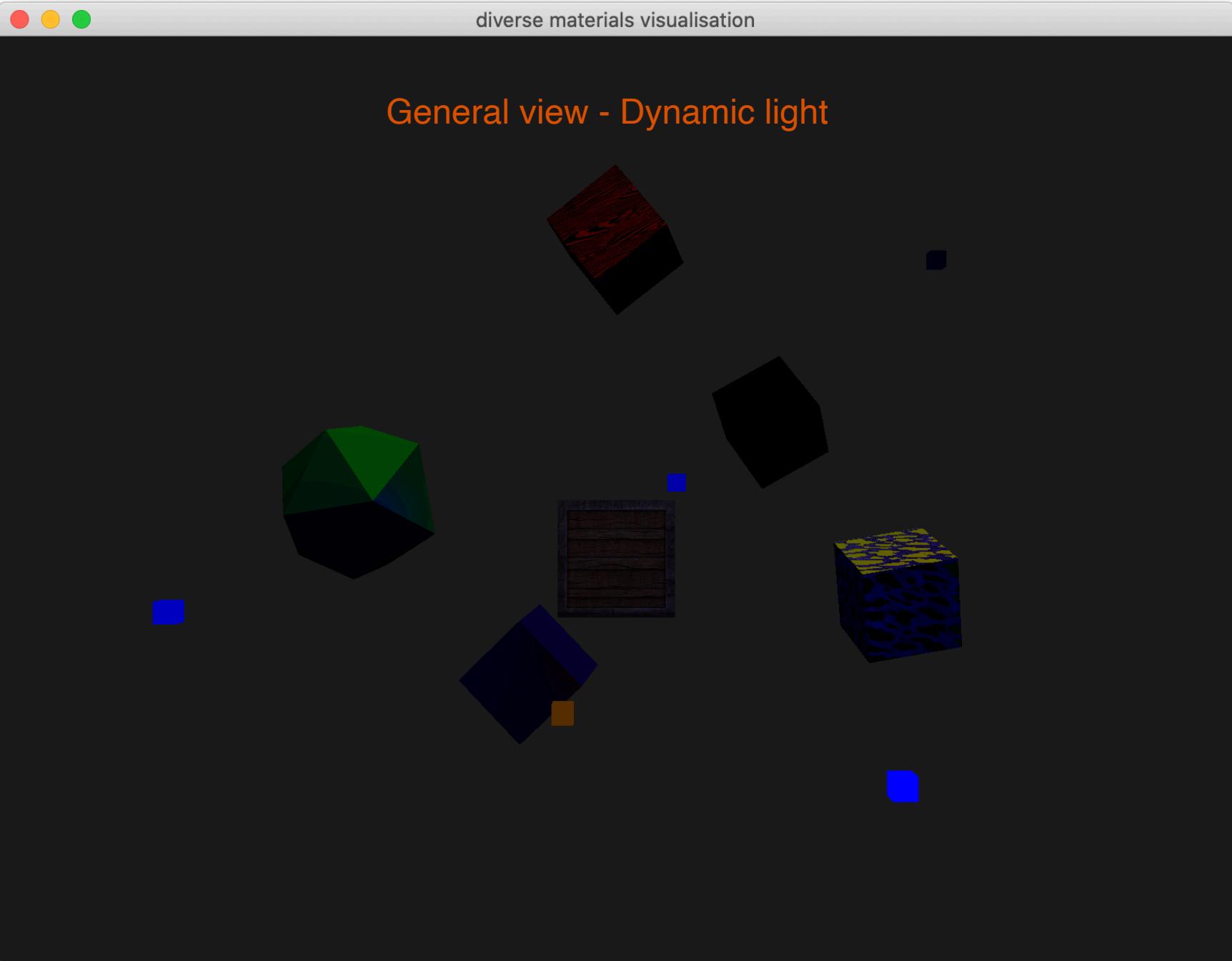
- Keys A-W-S-D to move
- Mouse for direction
- Scroll for zoom/unzoom
- Key L to set the lighting mode

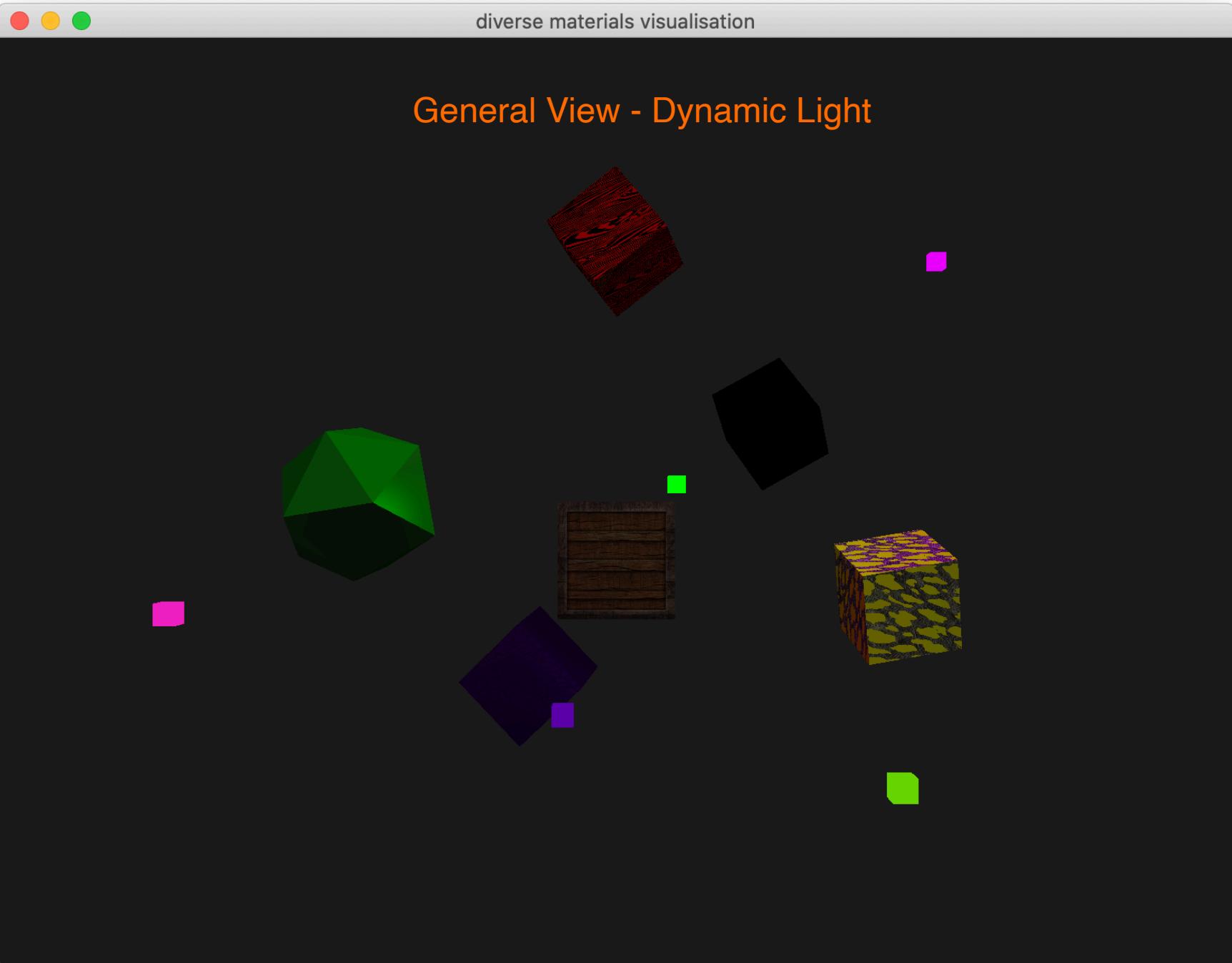
Implementation :

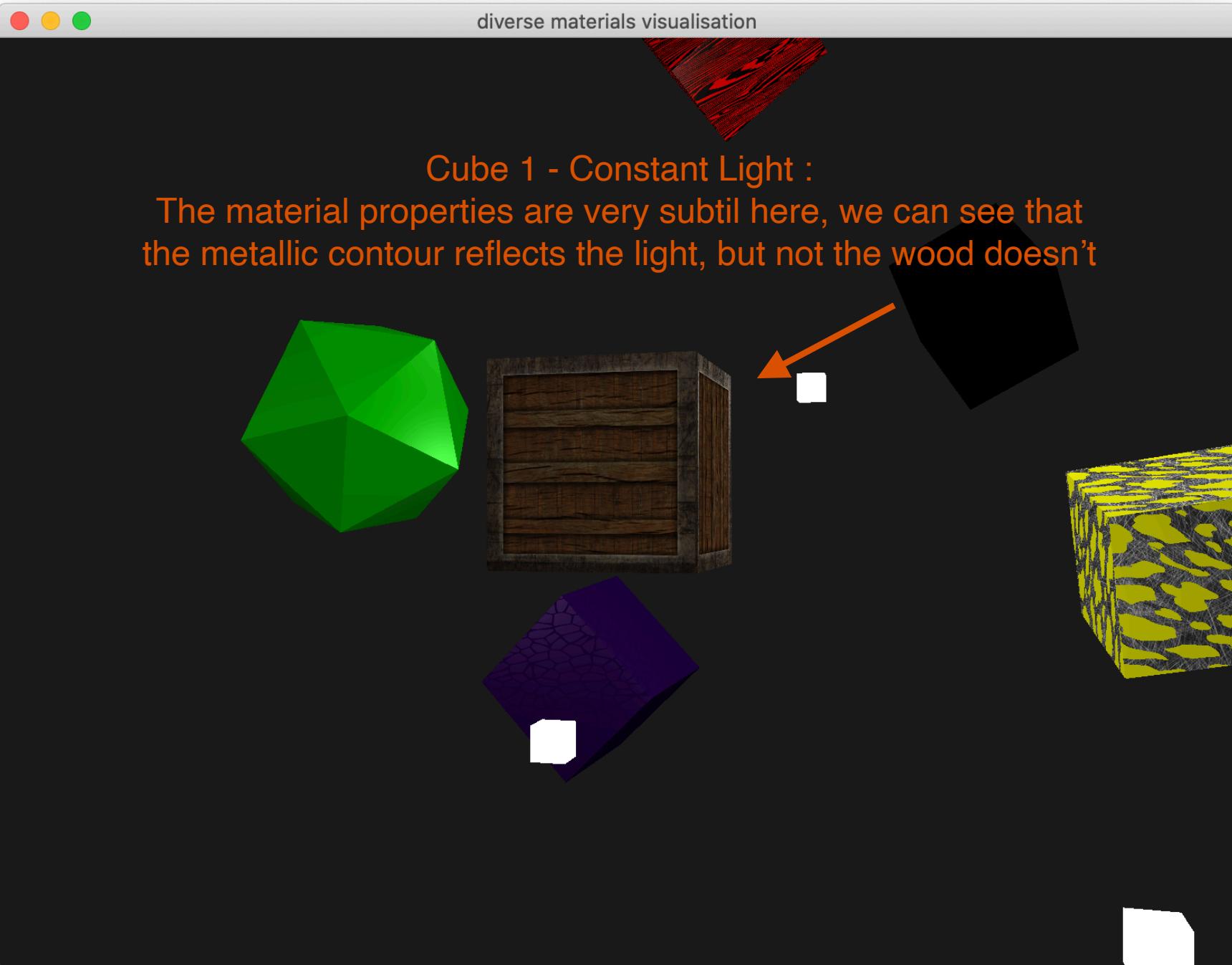
I rendered six cubes with various materials enlightened by five point-lights. The positions of the cubes and lights are encoded in two text files.

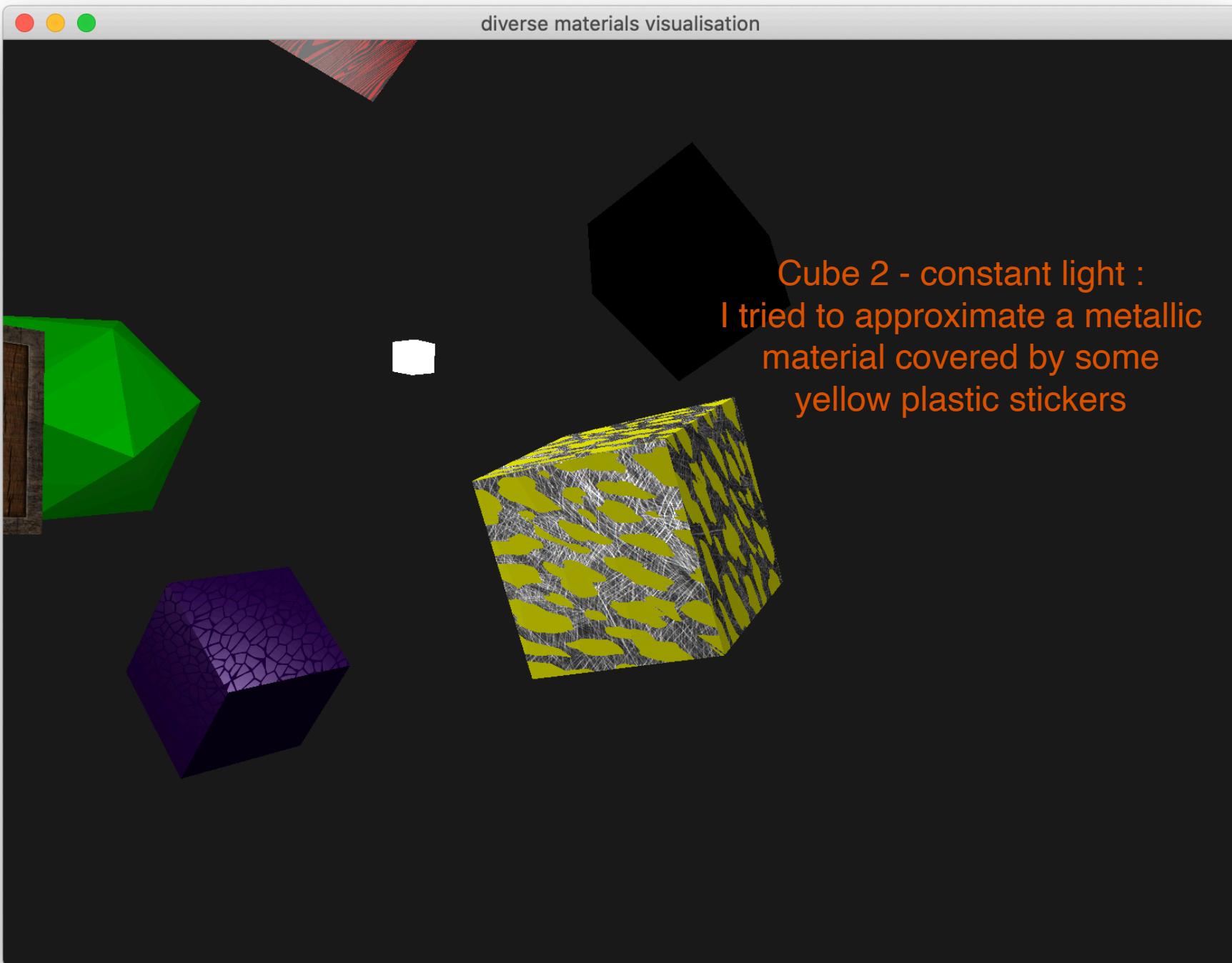
For each cube, I had to set the material parameters (such as the *shininess*) for rendering. I defined all the parameters of the cubes in the file objects.txt that you can find in res/objects. In this way, it was very easy (and satisfying) for me to test various materials just by changing the values in objects.txt. For example, try to replace the very first value 0.0f by 2.0f and rerun the program. See the difference? This value defines which image to use as the *diffuse texture* of the material for the first cube.

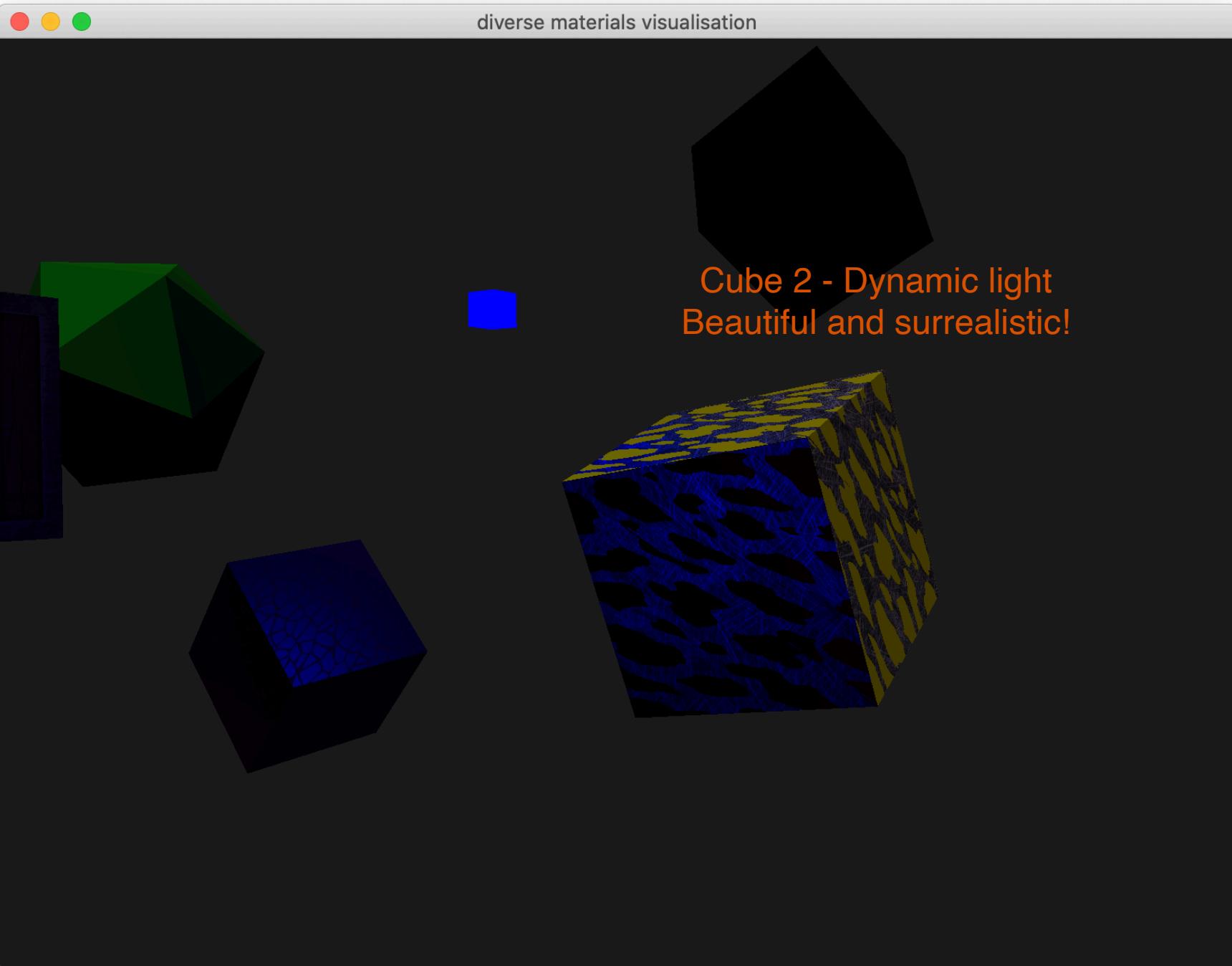


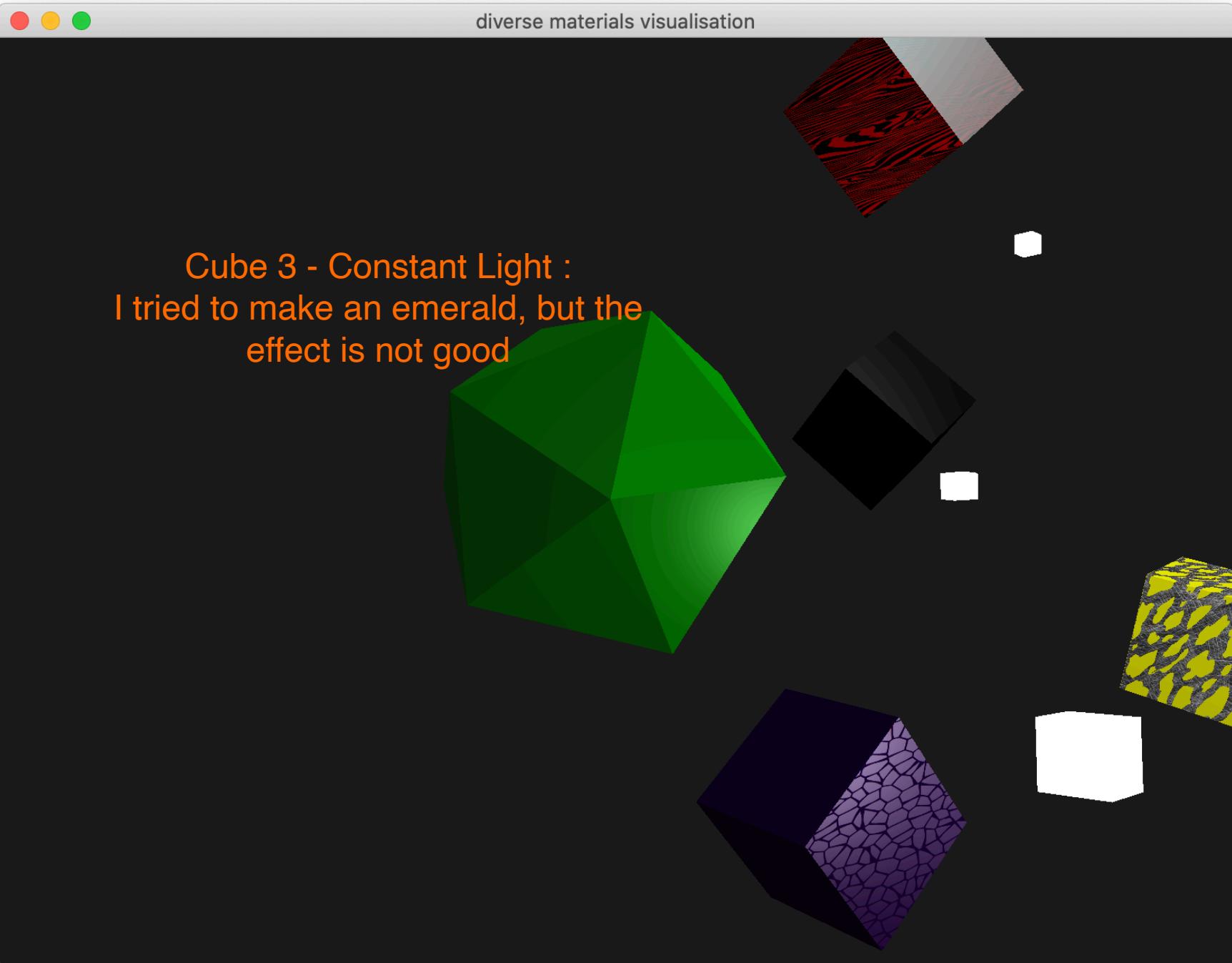








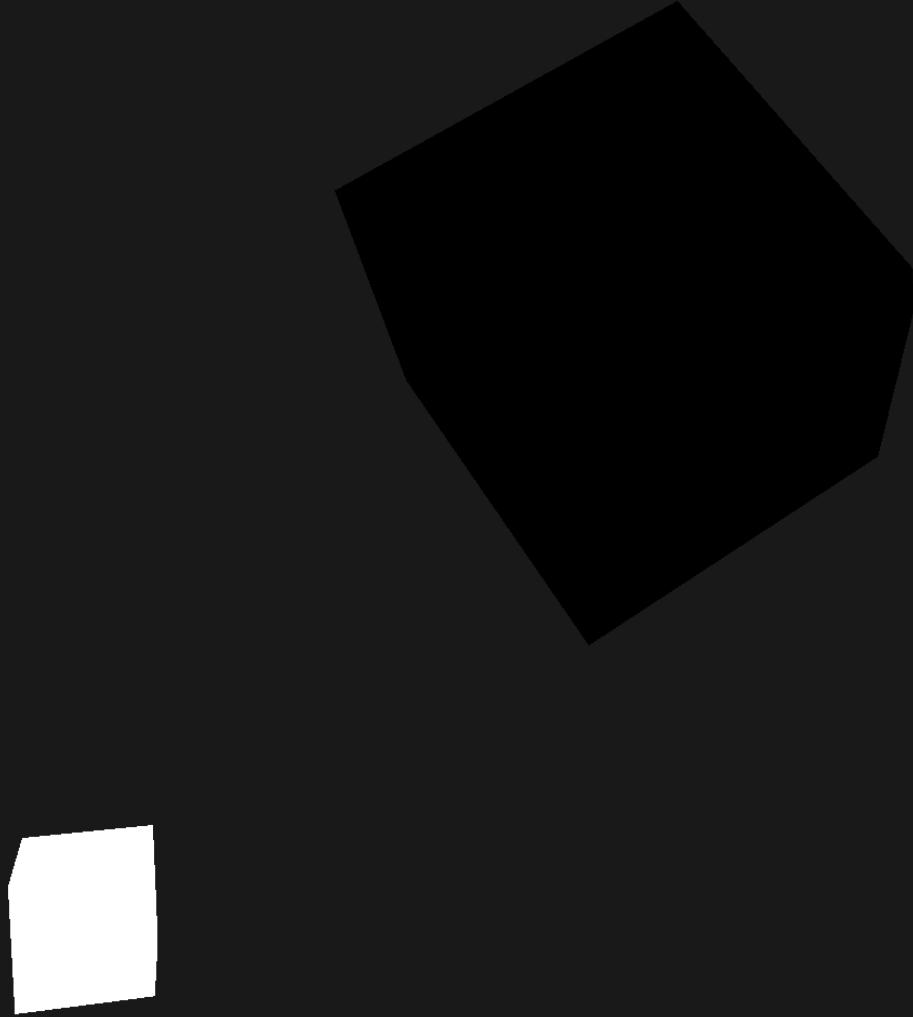


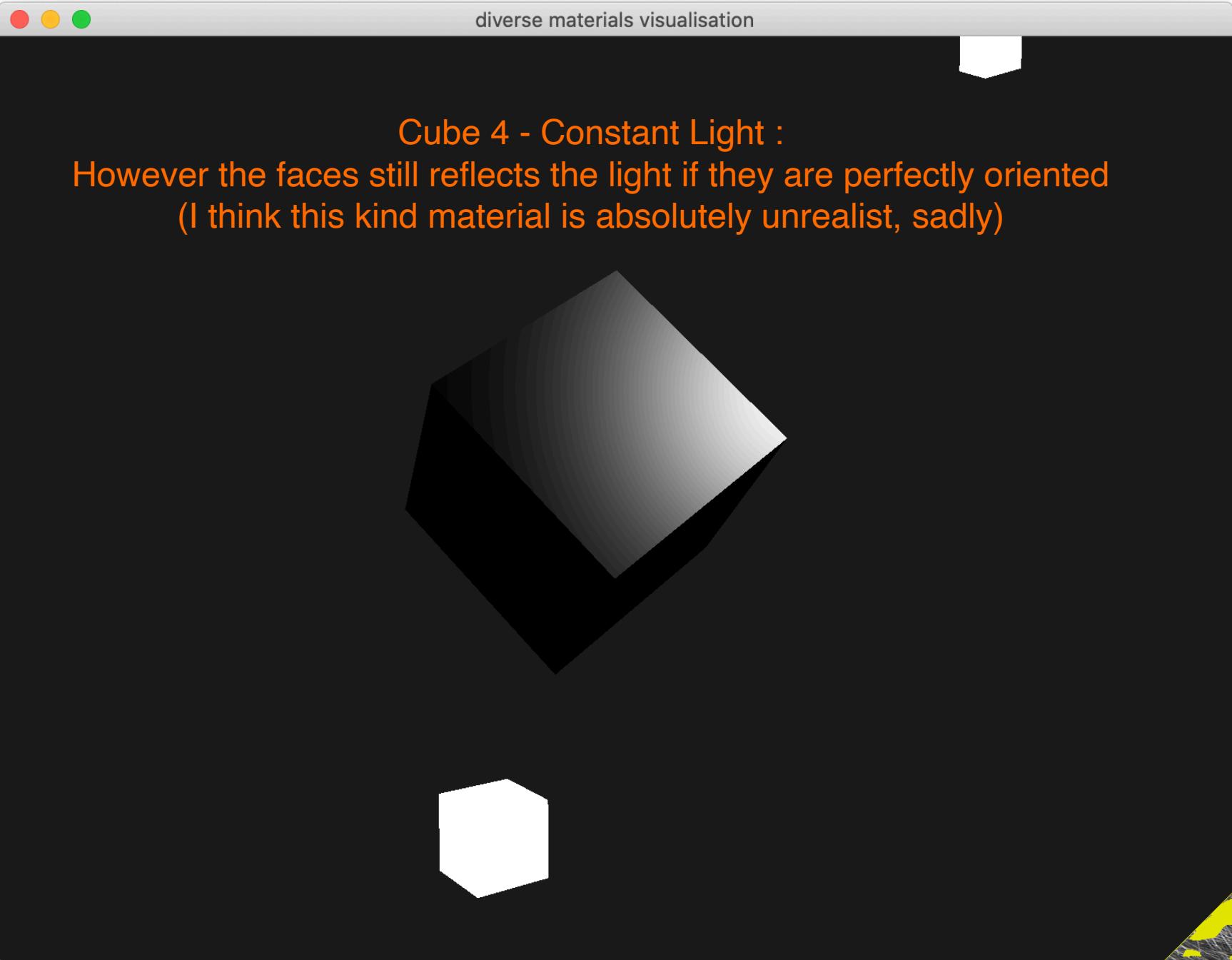


Cube 3 - Constant Light :
I tried to make an emerald, but the
effect is not good



Cube 4 - Constant Light :
It seems that this material absorbs totally the light







Cube 5 - Constant Light :
Even if there are two colors,
we can guess that the cube is
made by one single type of
material

