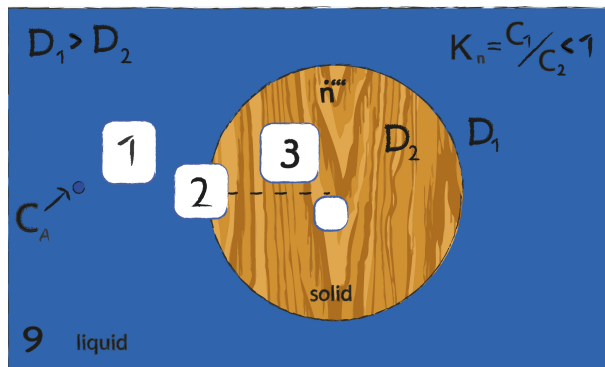


Diffusion: Task 9



The image describes a circular body surrounded by a liquid phase, whose diffusion coefficient is higher than the solid material and on the interface $C_2 > C_1$. Inside the solid body there is a homogeneous material production

There is a fixed concentration with continuous mass production that means continuous flux from equation

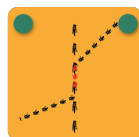
1



$$\dot{n} = A * D * (\delta C / \delta V)$$

Consequently, the line should be positive up.

2



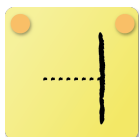
The diffusion coefficient in 2 is smaller than in 1, so the slope in 2 is steeper than in 1. On the interface, the concentration in 2 is larger than in 1

3



Due to the material production. The concentration gradient increases with the radius

4



due to symmetry reasons, the concentration gradient must be zero in the center