

## Quiz 7

Name:

Date: 08.04.2025

### Question 1

Specular reflection within the wavelength range of a pronounced absorption band of a material is:

- Strong
- Weak
- Specular reflection is not related to absorption

As recalled in lecture 4\_3-4\_4: specular reflection increases with the absorption coefficient.

### Question 2

What kinds of samples are best suited for analysis using the Kubelka-Munk theory? Give 2 examples.

The theory is suited when diffuse scattering is dominant. For example, it can be used for textile, paintings, papermaking, pharmaceutical, and others (see slides 7-8 in lecture 4-3, 4-4).

### Question 3

Indicate three parameters of a material that can be retrieved using ellipsometry.

Ellipsometry can be used to retrieve a material's **thickness**, **refractive index**, and **extinction coefficient** with high precision.