

SUMICEFINE Star-Shaped Titanium Dioxide (TiO₂) Particles

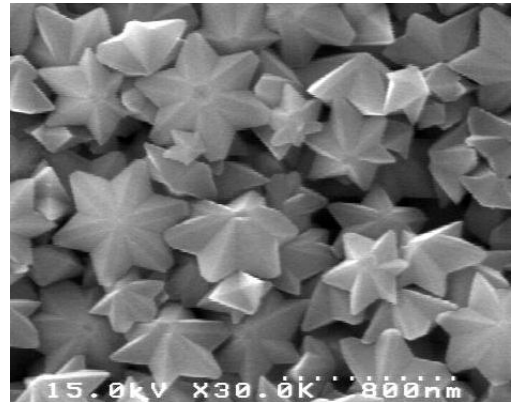
ST-K4-Si

【 Features 】

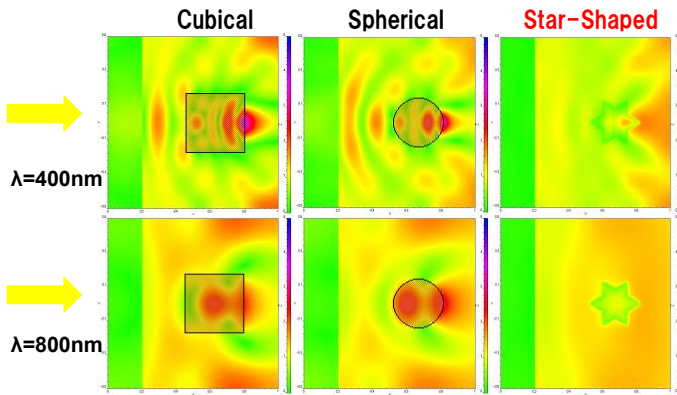
- Unique star Shape
- High purity, high crystalline, anatase phase
- Particle size : 0.1~1 μm
- Specific visible light scattering properties

- ➔ ① Aesthetic imperfection lightening effect
② Visually uniforming effect

(SEM Image)



(Effects of particle shape on the light scattering (optical simulation))



- Star-Shaped TiO₂ : Isotropic Scattering
- Cubical and Spherical TiO₂ : Anisotropic Scattering



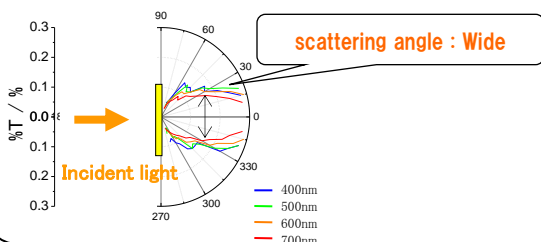
【Aesthetic imperfection lightening effect】

Light Intensity : Yellow Green < Yellow (Intensity of incident light) < Red < Purple

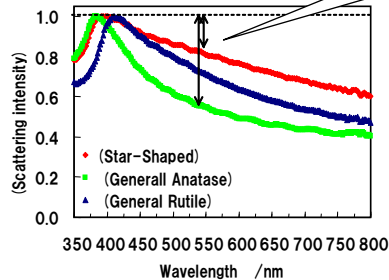
(Comparison with commercially available TiO₂)

Angular dependence of light scattering

(5% Star-Shaped TiO₂ Film)



The relationship between wavelength and Scattering intensity



Double maximum wavelength in visible region

- (light scattering properties)
- Less wavelength dependency
 - Wide light scattering angle and strong light intensity



【 Visually uniforming effect 】