

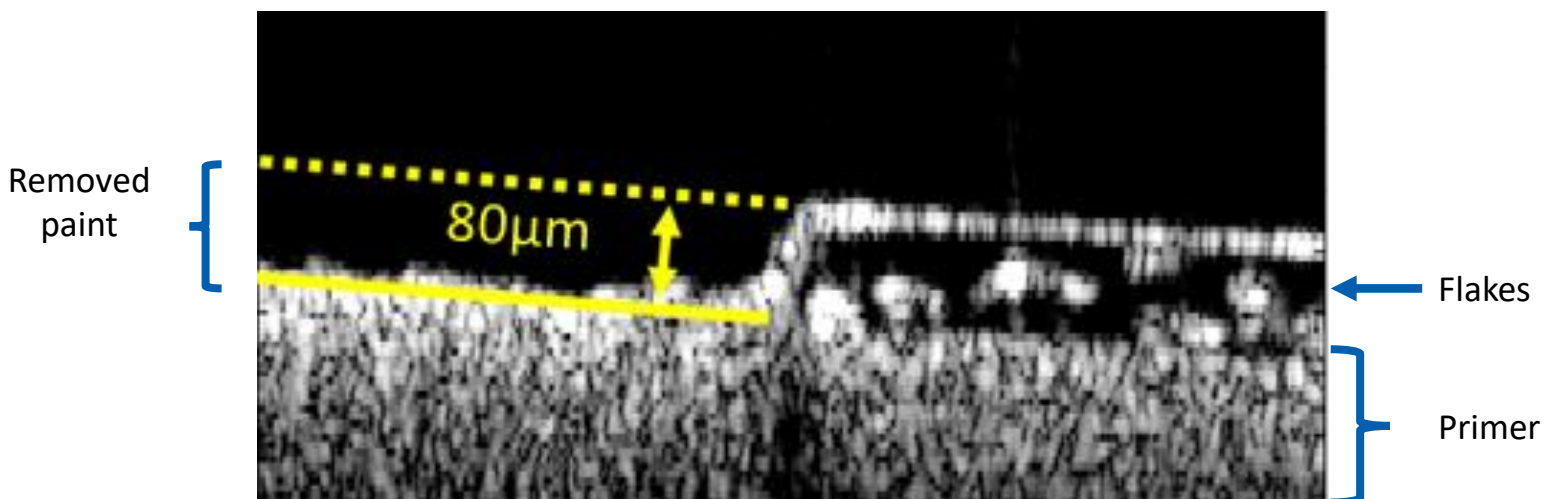


# Optical Coherence Tomography (OCT)

OCT is a high-resolution non-contact 3D imaging technology. OCT uses interference of low coherence light between a reference surface and an inspection object to construct a 3D multi-surface image of the object. Using this technology, multilayer surfaces can be imaged at high lateral and axial resolution.

## APPLICATIONS

- **Surface Profilometry** : Profile of clear coat, plus base coat can be measured simultaneously. Measurements are impervious to specular reflections, diffusive surfaces, changing lighting conditions, dust or aerosolized particles
- **Paint Layer Thickness** : Layer thickness is directly measured for all layers imaged with micrometer precision
- **Defect Detection** : Scratches, inclusions, dents and other defects can be measured and detected and porosity can be characterized
- **Metallic flake analysis** : Quantification and distribution of metallic flakes in paint can be assessed



## Surface Inspection with OCT Technology

### INO's OCT Focus

- **Higher speed OCT systems**
  - Multi-head OCT systems
  - MHz depth profile acquisition rates
- **Custom front ends**
  - Large field of view scan systems
  - Low profile or endoscopic
- **OCT for highly scattering paints (TiO content)**
  - 2 $\mu$ m OCT systems for higher penetration
- **Intelligent Algorithms**
  - Segmentation
  - Dimension measurement
  - Defect detection
  - Porosity characterization

MHz OCT scan of painted car surface

