
Thibault BRULÉ^b

Bernd Bleinsteiner^a, Sofia Gaiaschi^b

^aHORIBA Jobin Yvon GmbH, 64625 Bensheim; Neuhofstr.9, Germany

^bHORIBA France SAS, 14 boulevard Thomas Gobert, Passage Jobin Yvon, 91120 Palaiseau-France

Thibault.brule@horiba.com

Use of complementary techniques for depth profiling of mobile screen protection covers

Despite the improvement in glass manufacturing, it is still annoying when a brand new mobile phone falls on the ground and its screen shatters. To avoid (or at least minimize) this scenario, a new industry has risen and is supplying mobile screen protection covers. Besides protecting mobile screens from breaking, such protection films avoid scratching of the display when carrying the phone in the pocket, and they are also dirt-repellent. The cheapest ones are usually plastic films that can be stuck on the telephone screen. But have you ever wondered what they are made of?

As simple as such polymer foils look, the polymer technique behind them is quite demanding. Controlling the production process to ensure reliable protection capability for large batches is required to guarantee consistent quality.

At HORIBA Scientific, thanks to our wide characterization technique portfolio, we can provide some of the necessary instruments for the correct analysis and process control of polymer films.

In this presentation we will focus on analytical depth profiling methods, providing both composition and layer structure. We will show how micro Raman Spectroscopy and pulsed Radio Frequency Glow Discharge Optical Emission Spectroscopy, coupled with the Ultra Fast Sputtering, can provide a comprehensive understanding of the molecular footprints and the elemental composition of generic commercially available mobile screen protection covers.