



## Antireflective Coatings for medical applications

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In medical device technology, optical systems are subject to increasing demands on efficiency and quality. Especially for medical imaging, ghost images have to be avoided and visible light transmittance needs to be enhanced, to ensure highest imaging quality and patient's safety. Therefore, antireflection coatings (AR) are indispensable for achieving maximum luminous efficiency of optical elements. So far, for medical instruments such as endoscopes, there are no satisfying solutions for AR-coatings on the heavily stressed outer front surfaces. In medical technology, such coatings have to meet particularly high stability requirements. This poster shows that not only the intrinsic material properties determine the solubility behaviour, but also the deposition method and the deposition parameters have a significant influence on the durability of such coatings. To get towards an approved long-time stability, as it would be required for a release of such coated parts for the use in hospital, a combination of different layer materials for the uppermost layer in the AR stack was necessary.