

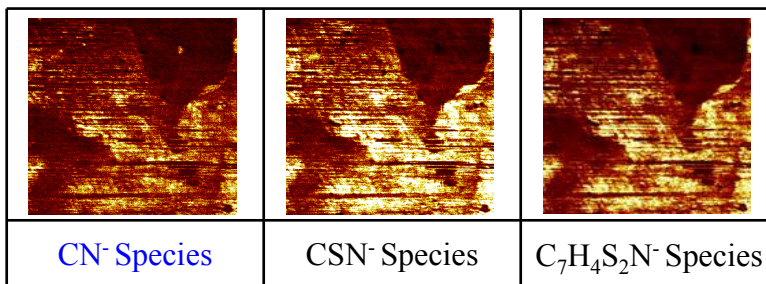
**Subject :** Characterization of innovative DLC coatings on polymer substrate

**Techniques :** SSIMS, DSIMS, MEB-EDS

✓ Morphology, chemical information from surface and cross section

### Résultats :

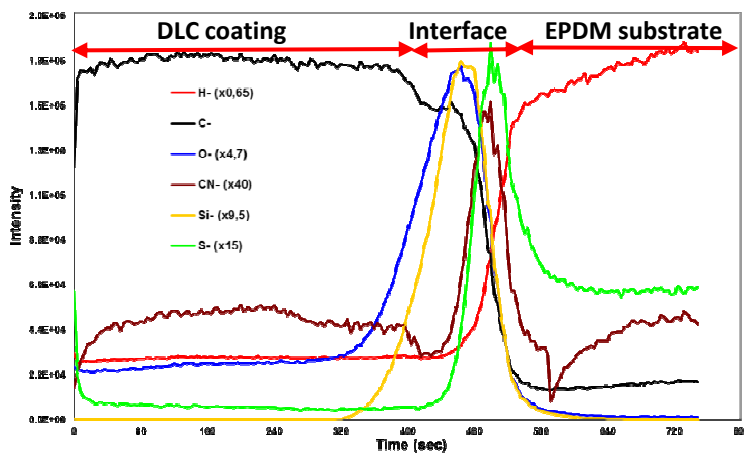
SSIMS molecular imaging before coating



→ Visualization of MBT\* species (vulcanizer accelerator) detected before coating on the outermost surface of the elastomer

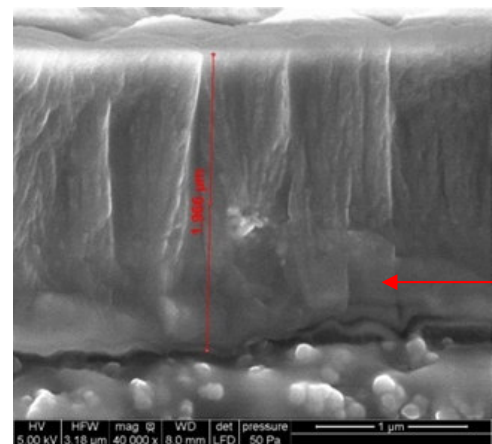
\*MercaptoBenzoThiazole

DSIMS profil after coating



- Si and O peaks at the interface
- CN- species at the interface which indicates that MBT is still present after coating
- H et O levels comparison between the different DLC

SEM coating images



- Structural characterisation : morphology differences between Si undercoat and DLC coating
- Coating depth

### Conclusion :

- ✓ DLC characteristics checking : depth, morphology and chemical composition
- ✓ Vulcanizer Accelerator surface enrichment, still present after coating