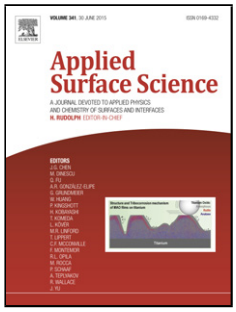

Title: Quantification of the toxic hexavalent chromium content in an organic matrix by X-ray photoelectron spectroscopy (XPS) and ultra-low-angle microtomy (ULAM)

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Highlights:

- Common methods are not suitable for a reliable determination of Cr(VI) in organic coatings on steel.
- Our proposed method is a combination of XPS and ultra-low-angle microtomy (ULAM).
- The results allow referring to legal regulations of the Cr(VI) concentration.
- For this method no accurate sample parameters are required, as it is, e.g., necessary for ICP-OES in combination with an alkaline endpoint extraction.