

Abstract Submitted  
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**2D Imaging of Anti-relaxation Coating Quality Using Regionally Specific Hyperfine Polarization**<sup>1</sup> K. ZHAO, Z. WU, Department of Physics, Rutgers University, Newark, NJ 07102 — We show that the hyperfine polarization in the vicinity ( $\sim 10^{-5}$  cm) of cell surfaces can be used as a novel way to quantify and map the regional surface property inside optical pumping cells. In silicone-coated cells our method allows us to image the regional quality of the coatings, revealing for the first time the existence of areas that have strikingly different qualities.

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