

Observation of birth of “ageing” effect in Bi₂Se₃ photoemission spectra

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Using the comparative ARPES spectra analysis to explore the detector non-linearity [1], we have developed a procedure to strongly enhance the “ageing” effect in the spectra. The method consists in filtering of useful data on the intensity-intensity plot of two comparing images. The conceiving appearance of quantum well states [2,3] at the surface of topological insulator Bi₂Se₃ is shown as an example.

[1] A. A. Kordyuk *et al.*, Phys. Rev. B **85**, 075414 (2012).

[2] M. Bianchi *et al.*, Nature Communications, **1**, 128, (2010).

[3] M. Bianchi *et al.*, Semiconductor Science and Technology **27**, 124001 (2012).