A method to correct coordinate distortion in EBSD maps

Drift during electron backscatter diffraction mapping leads to coordinate distortions in resulting orientation maps, which affects, in some cases significantly, the accuracy of analysis. A method, thin plate spline, is introduced and tested to correct such coordinate distortions in the maps after the electron backscatter diffraction measurements. The accuracy of the correction as well as theoretical and practical aspects of using the thin plate spline method is discussed in detail. By comparing with other correction methods, it is shown that the thin plate spline method is most efficient to correct different local distortions in the electron backscatter diffraction maps.

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