Grain Boundary Detection Based on Superpixel Merges

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Abstract : The distribution of material grain sizes reflects the strength, fracture, corrosion and other properties, and the grain size can be acquired via the grain boundary. In recent years, the automatic grain boundary detection is widely required instead of complex experimental operations. In this paper, an effective solution is applied to acquire the grain boundary of material images. First, the initial superpixel segmentation result is obtained via a superpixel approach. Then, a region merging method is employed to merge adjacent regions based on certain similarity criterions, the experimental results show that the merging strategy improves the superpixel segmentation result on material datasets.