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基于H-Dome重构的大豆图像分割

Title:　　　　Image Segmentation of Soybean Based on H-Dome

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关键词：　　大豆籽粒 (KeySearch.aspx?type=KeyWord&Sel=大豆籽粒)；图像分割 (KeySearch.aspx?type=KeyWord&Sel=图像分割)；分水岭 (KeySearch.aspx?type=KeyWord&Sel=分水岭)；H-Dome　(KeySearch.aspx?type=KeyWord&Sel=H-Dome)

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摘要：　　　?在大豆品质检测过程中，大豆图像籽粒粘连给后续检测、分析等处理带来较大的困难。为此，提出了一种基于H Dome重构的分水岭算法，先对二值图像进行H-Dome灰度形态重构合并极值，再对重建后的图像用距离变换得到距离图像，然后利用分水岭算法进行图像分割，最后提取分割线得到最终分离图像。该算法对籽粒的分割正确率为96.6%，分割效果较好。

Abstract:　　?During quality inspection of soybean, the adhesion of soybean seeds in image brings a great difficulty to the posterior detection and analysis.Accordingly, a watershed algorithm based on H-Dome was put forward.After the local minimums were merged by the grayscale morphological reconstruction of H-Dome, the distance transform of reconstructed image was obtained.And then the watershed algorithm was used to segment the image.At last, the watershed line was extracted to obtain the final segmentation image.The segmentation ratio of proposed algorithm reached 96.6%.

相似文献/References:

[1]宋志峰,王丽,孟凡钢,等.吉林省普通大豆品种（系）异黄酮含量分析[J]. (darticle.aspx?type=view&id=200906028)大豆科学,2009,28(06):1076.[doi:10.11861/j.issn.1000-9841.2009.06.1076]
SONG Zhi-feng,WANG Li,MENG Fan-gang,et al.Analyse of Isoflavones Content in Normal Soybean Varieties (Lines) in Jilin Province[J].Soybean Science,2009,28(06):1076.[doi:10.11861/j.issn.1000-9841.2009.06.1076]
[2]刘中奇,李志刚,谭崴崴.不同大豆品种籽粒体积、含水量、脂肪和蛋白质积累动态分析[J]. (darticle.aspx?type=view&id=200702016)大豆科学,2007,26(02):194.[doi:10.3969/j.issn.1000-9841.2007.02.016]
LIU Zhong-qi,LI Zhi-gang,TAN Wei-wei.DYNAMIC ANALYSIS OF ACCUMULATION OF VOLUME, WATER CONTENT, FAT AND PROTEIN OF DIFFERENT SOYBEAN SEEDS[J].Soybean Science,2007,26(06):194.[doi:10.3969/j.issn.1000-9841.2007.02.016]
[3]李广领,董丽红,刘博,等.基质分散萃取-高效液相色谱分析大豆植株、籽粒及豆田土壤中咪唑乙烟酸残留[J]. (darticle.aspx?type=view&id=201503022)大豆科学,2015,34(03):480.[doi:10.11861/j.issn.1000-9841.2015.03.0480]
LI Guang-ling,DONG Li-hong,LIU Bo,et al.Residue Analysis Method of Imazethapyr in Soybean Plants, Seed and Soybean Field by QuEChERS-HPLC[J].Soybean Science,2015,34(06):480.[doi:10.11861/j.issn.1000-9841.2015.03.0480]

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