機器人與多感知實驗室
Robotics & Multi-perception Lab

THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

Berkeley
UNIVERSITY OF CALIFORNIA

基于深度学习的手机玻璃缺陷检测研究成果

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13/12/2018

手机玻璃缺陷拍照系统

ITS/445/16FP Deep Learning Based Defect Inspection of Smartphone Glass

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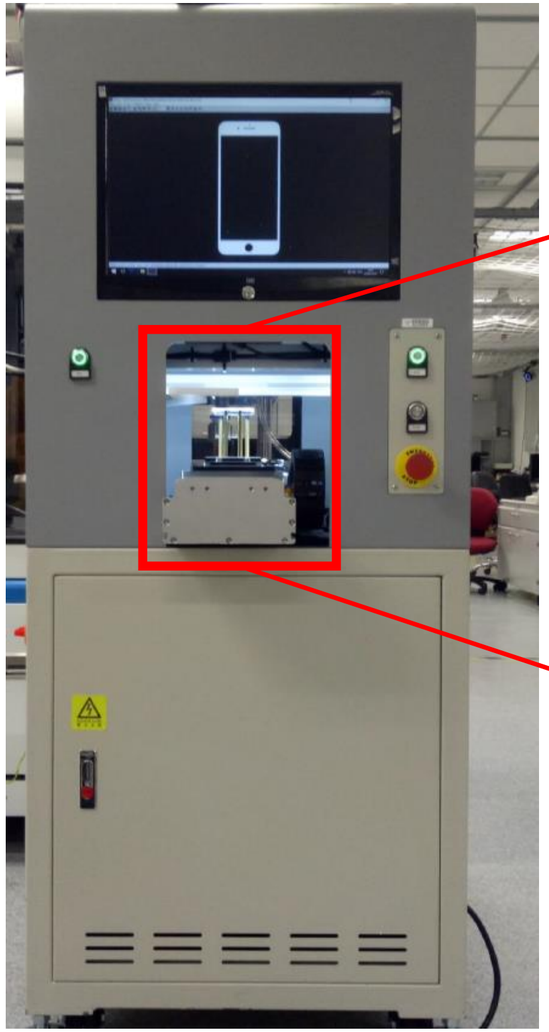
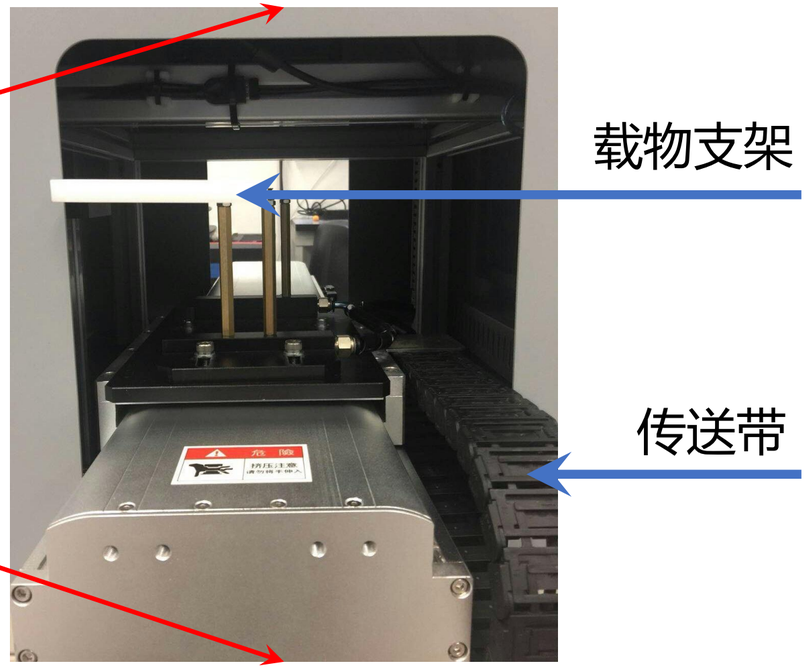
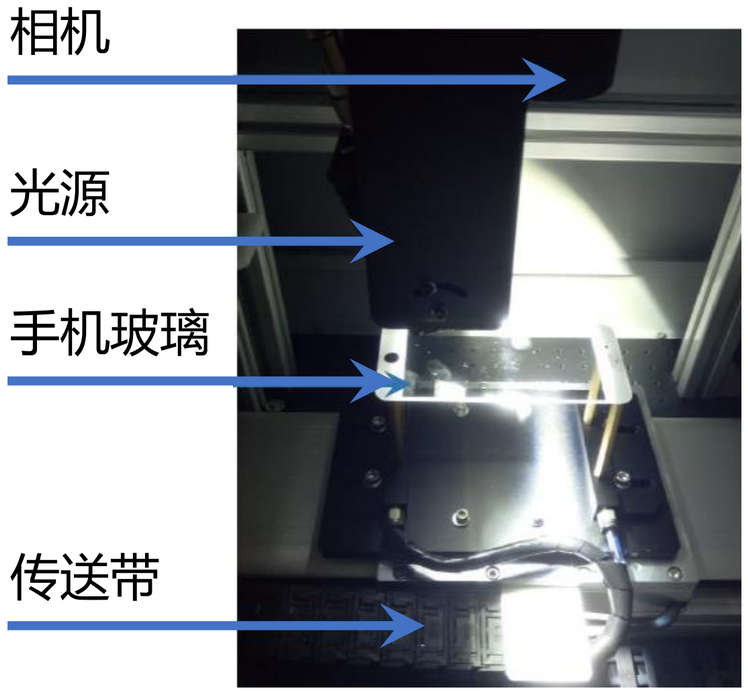


正面





里面

手机玻璃缺陷拍照系统

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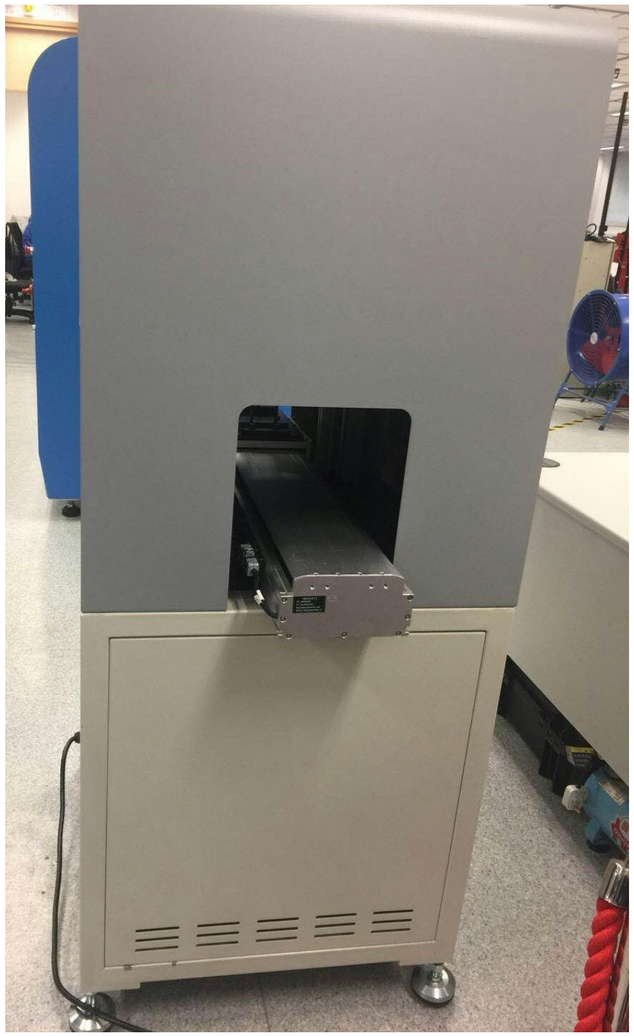
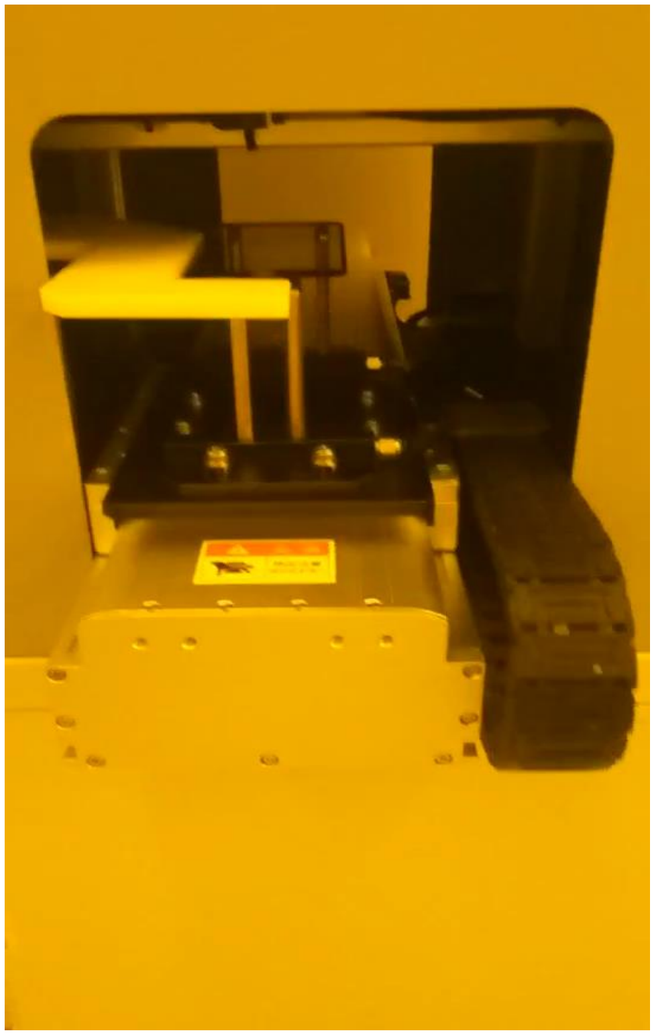


背面



操作与拍照展示

拍照效果

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1. 以iPhone 6的手机玻璃为例，设备可以清晰地拍到手机玻璃上的划痕、坑与裂缝等缺陷，最小可拍到>10μm的缺陷。
2. 图像大小>400MB。
3. 经测试，设备可以24小时连续工作。

缺陷照片的采集

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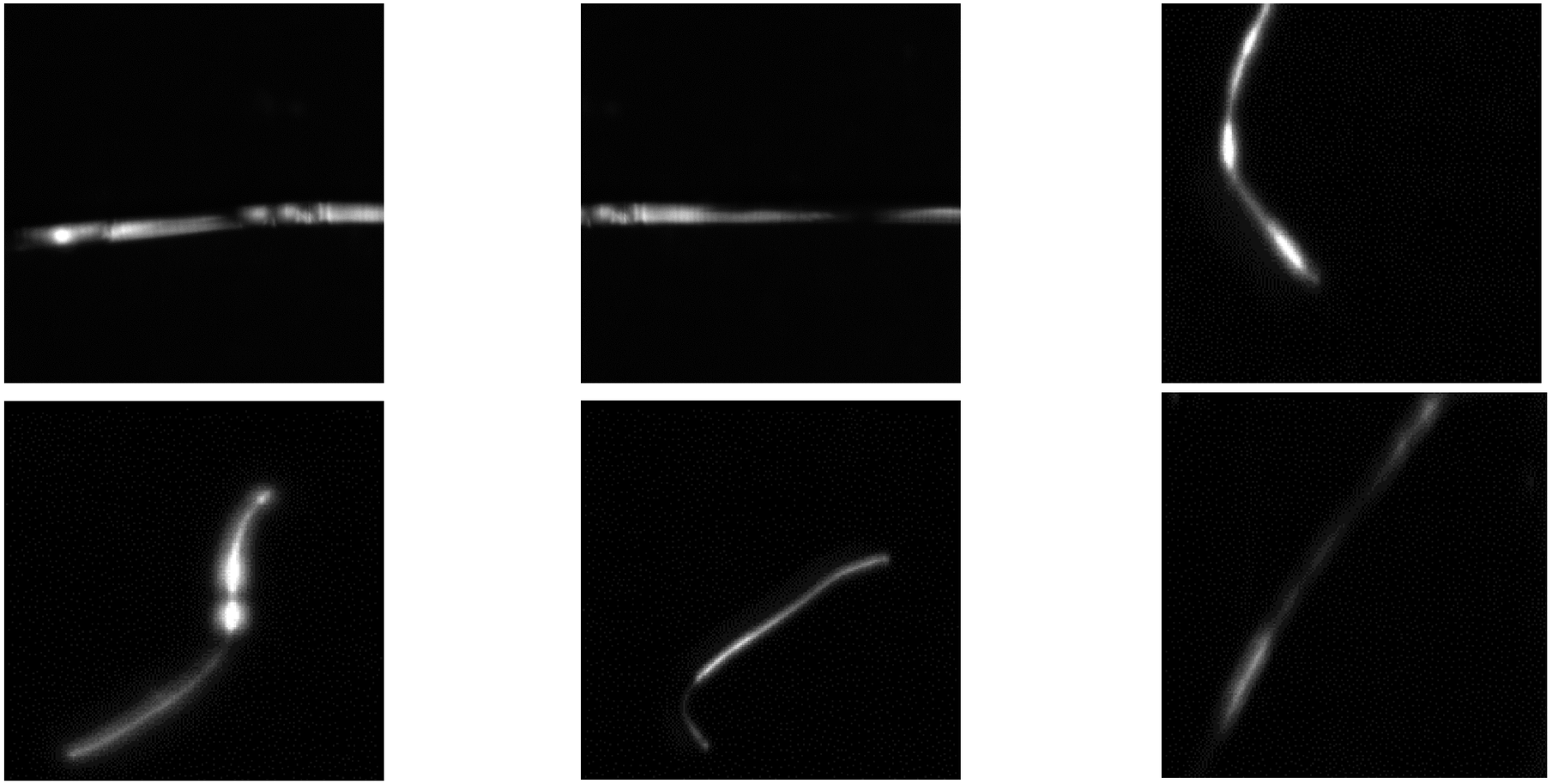

(1) 划痕

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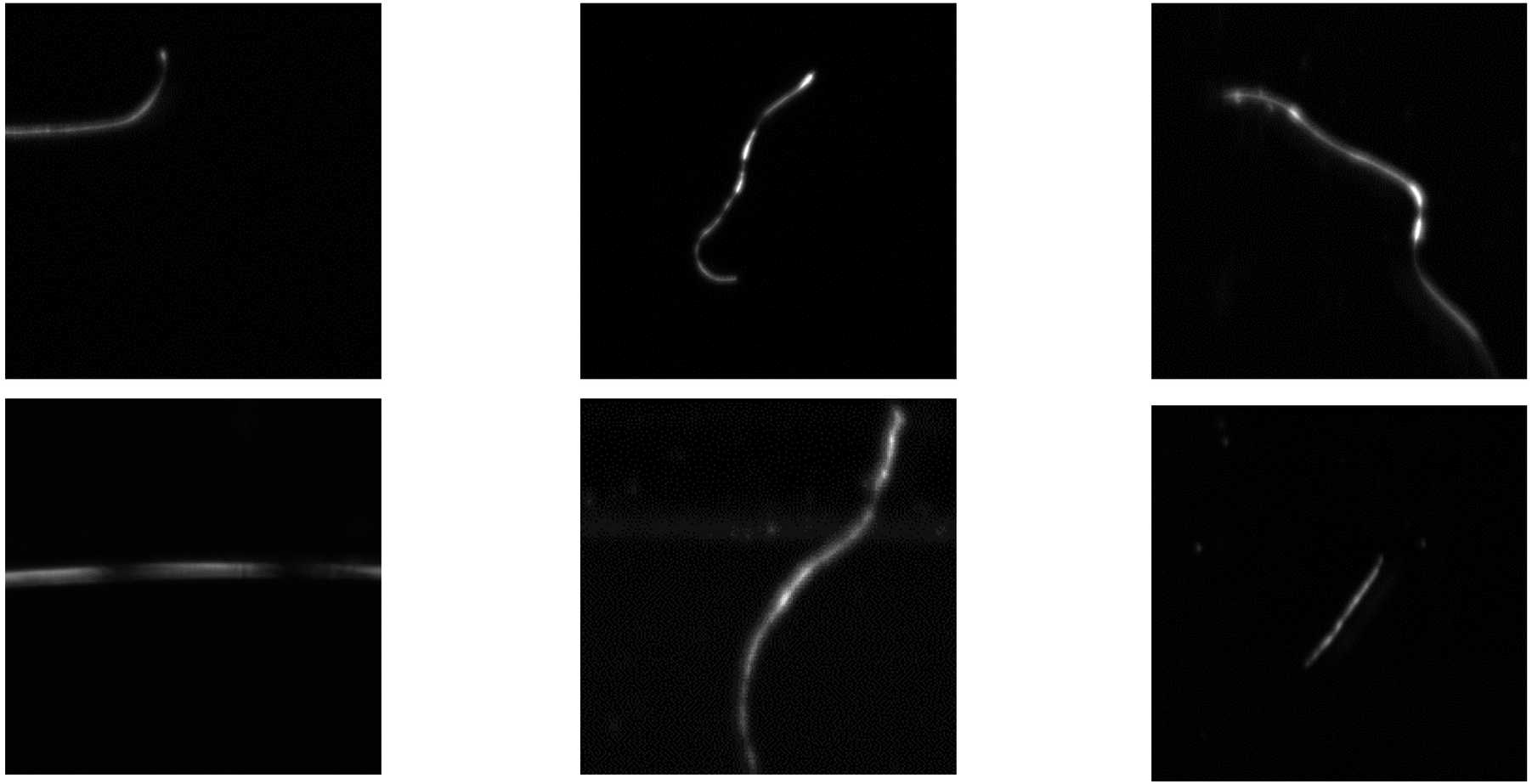

(1) 划痕

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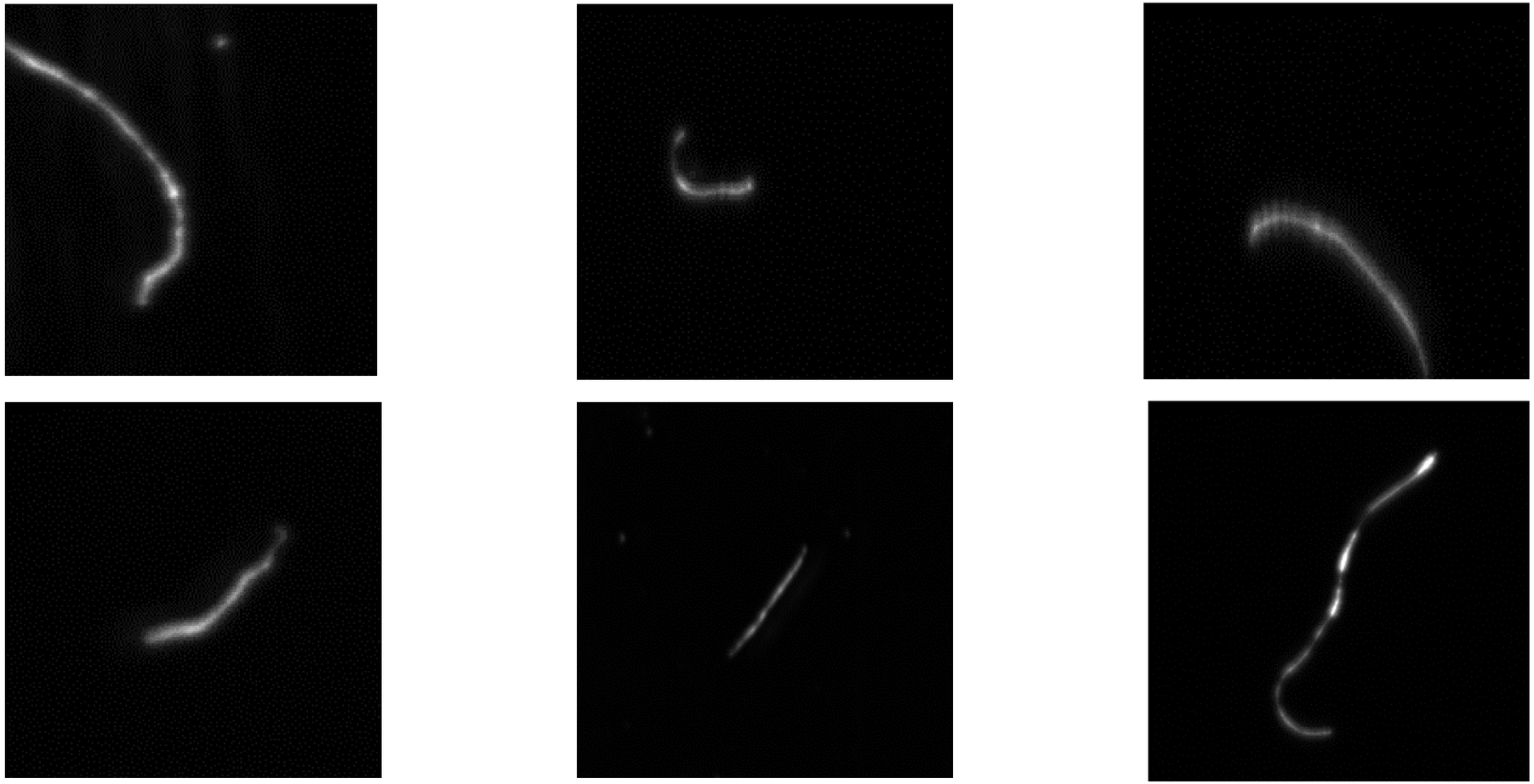

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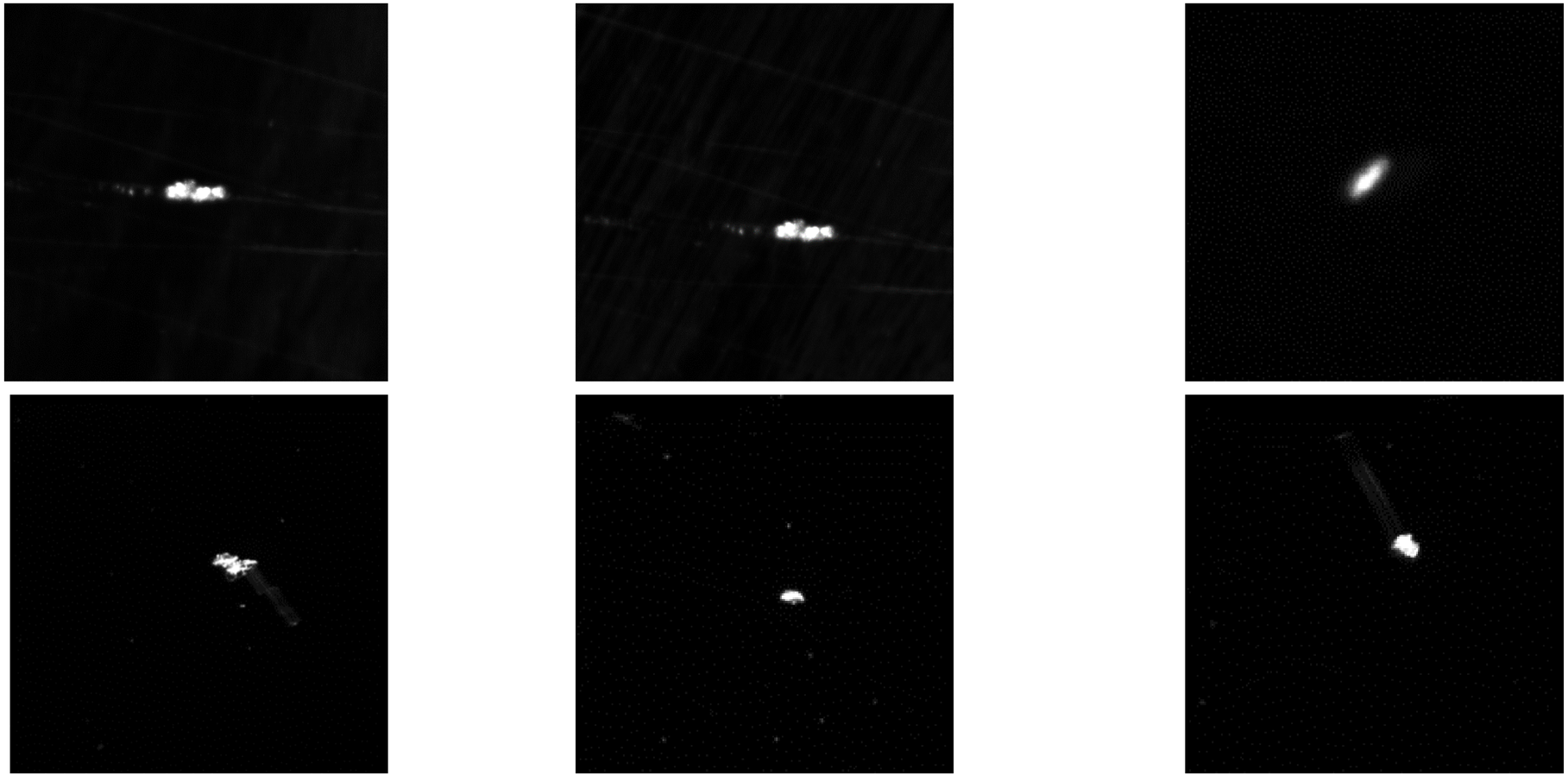

(2) 坑

缺陷照片的采集

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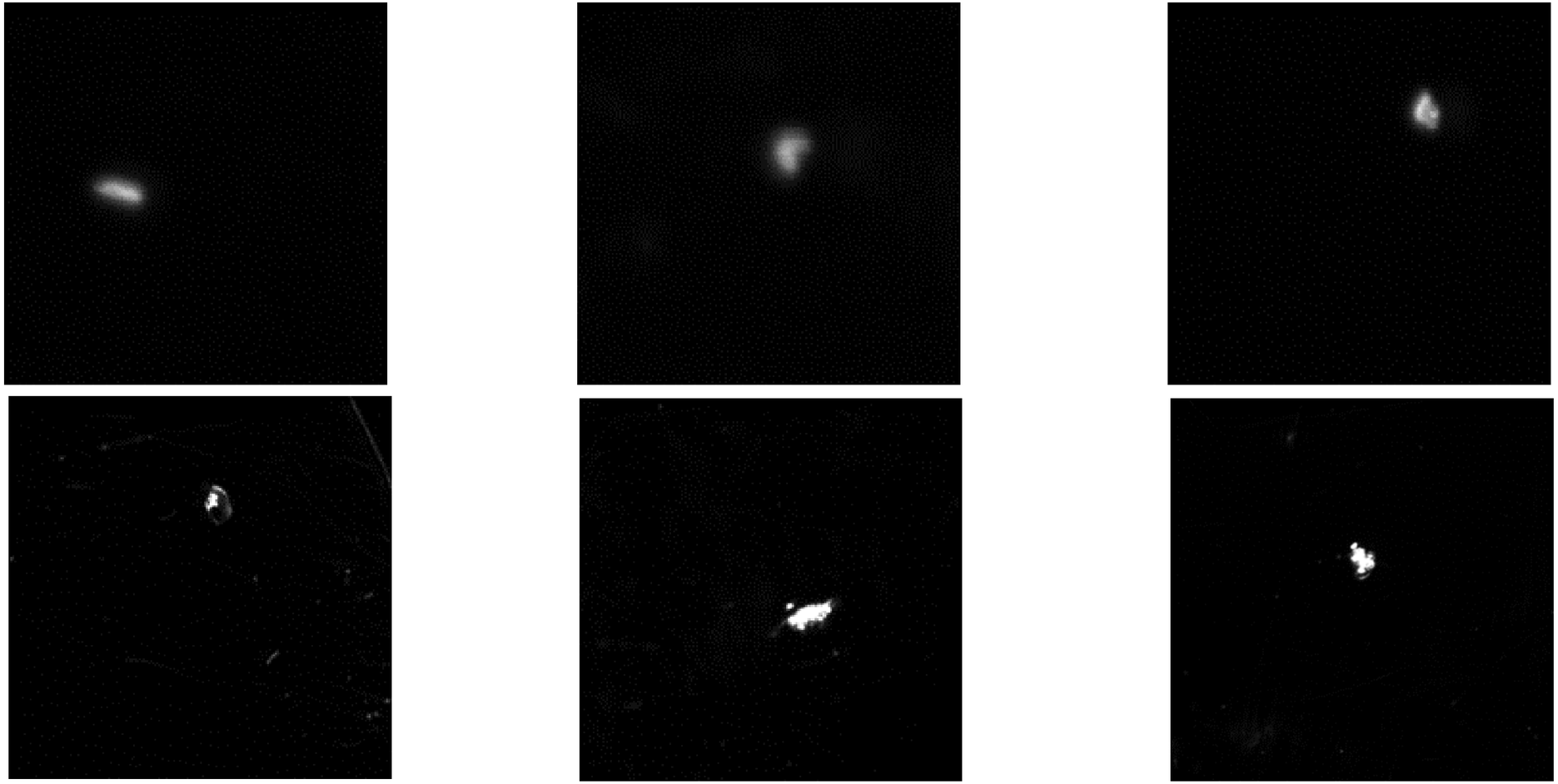

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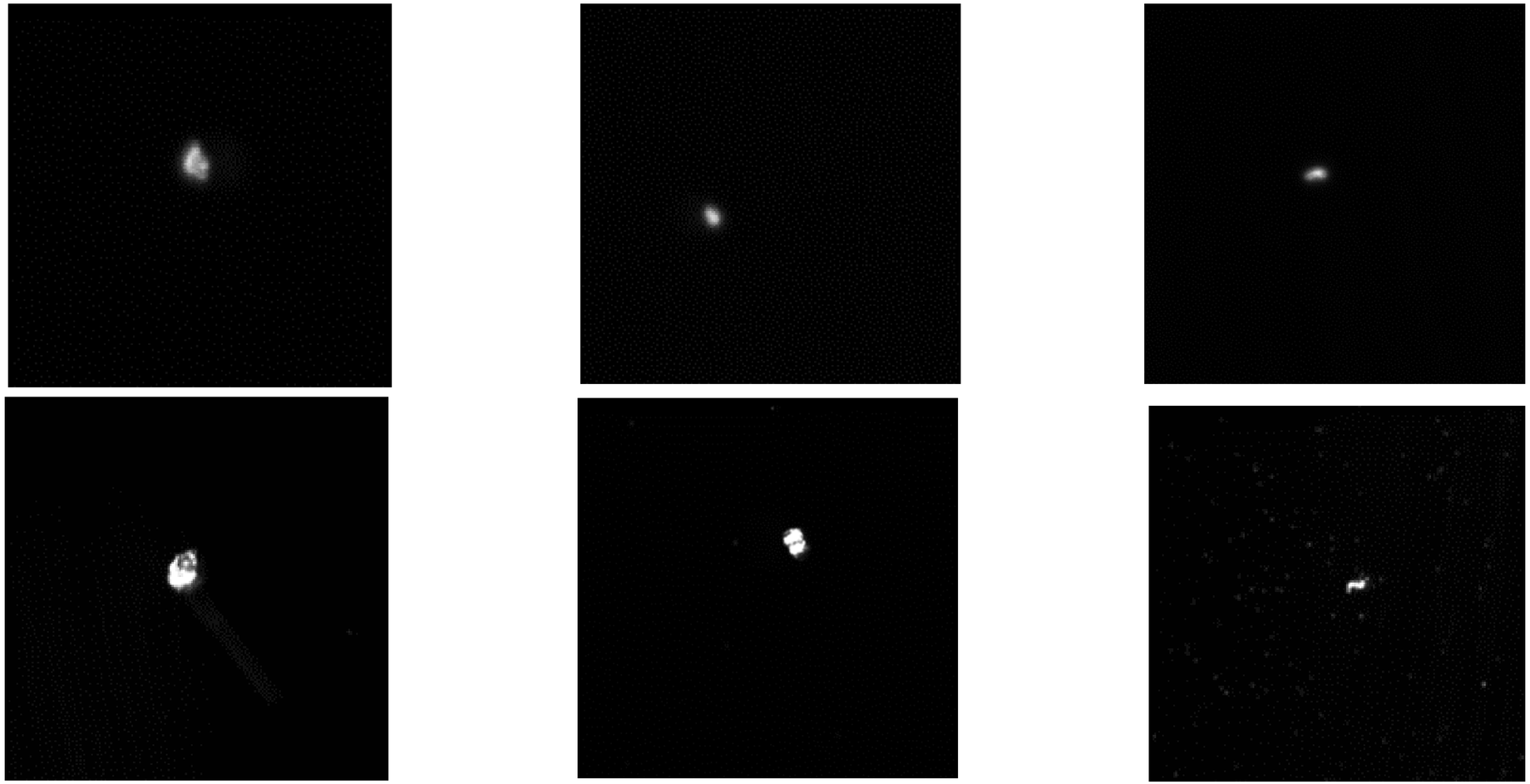

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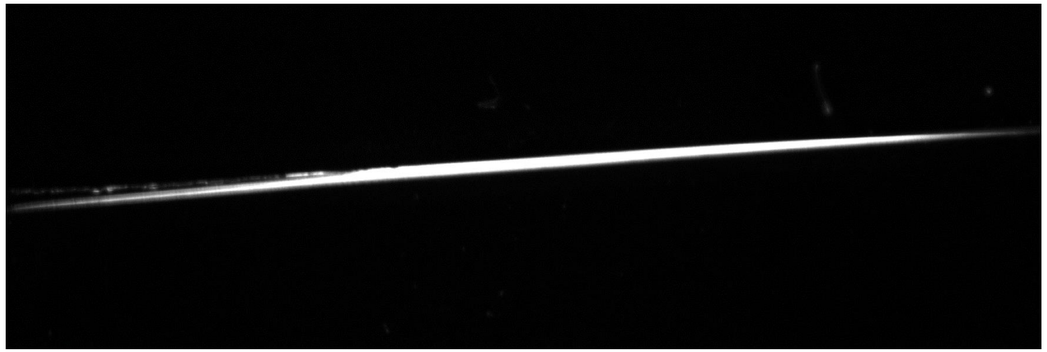

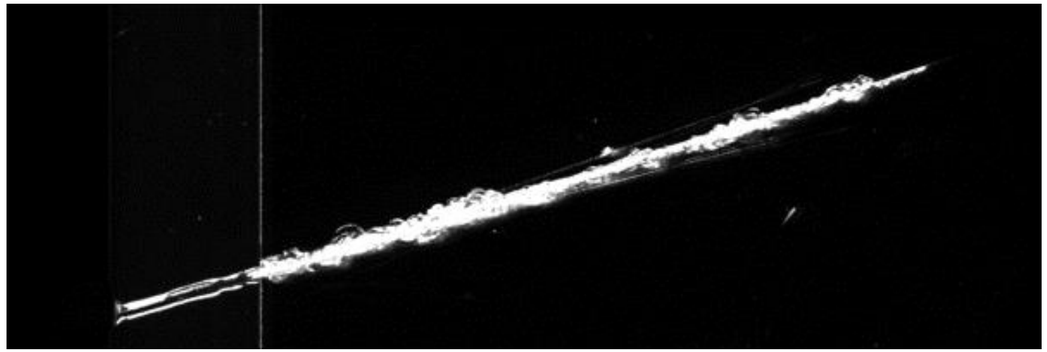

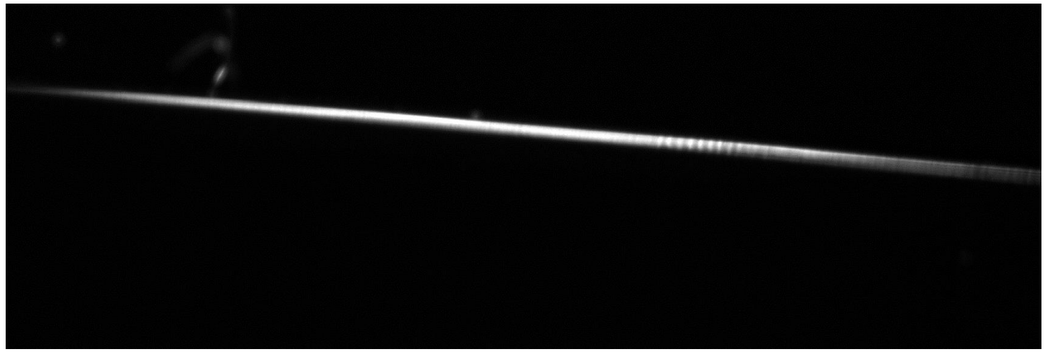

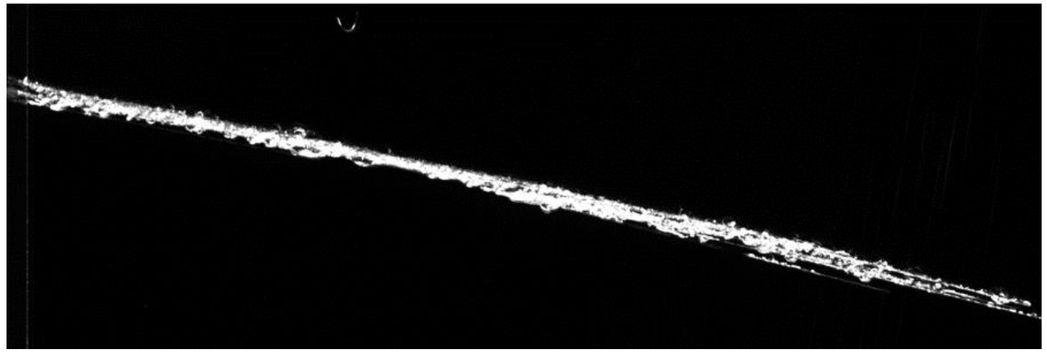

(3) 裂缝

缺陷照片的采集

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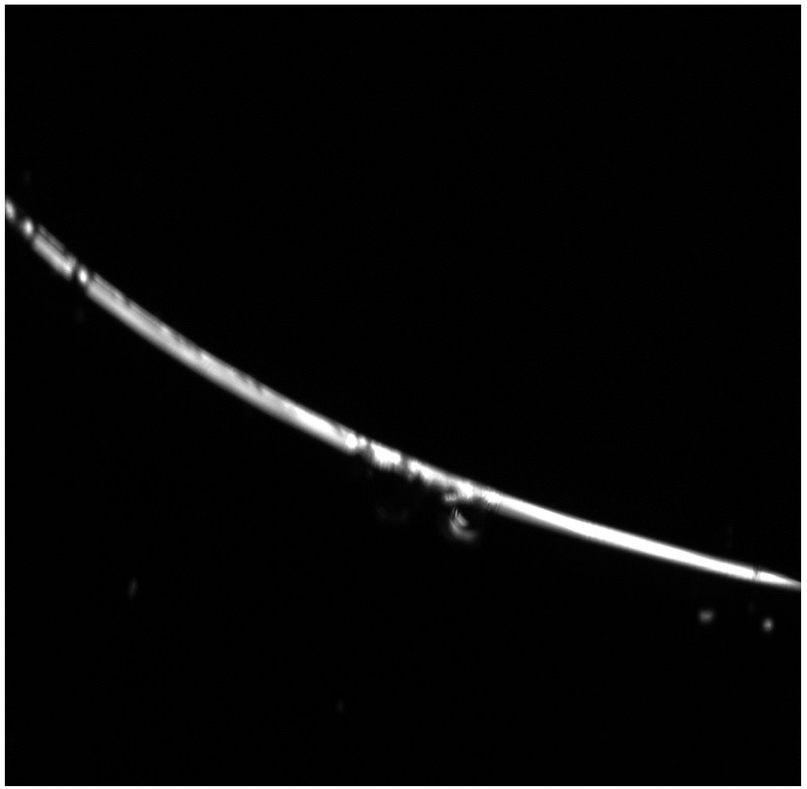

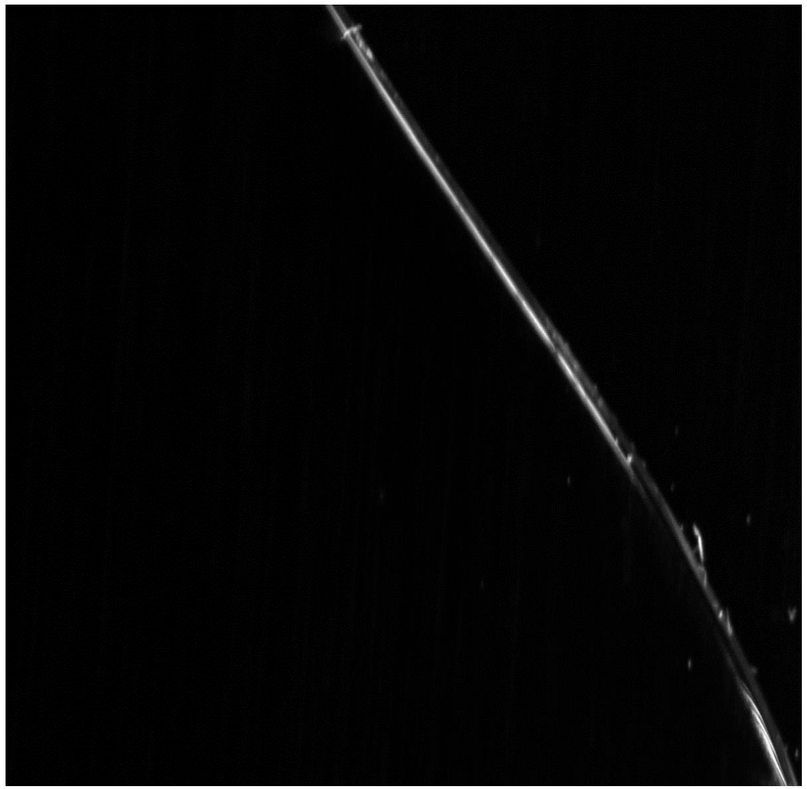

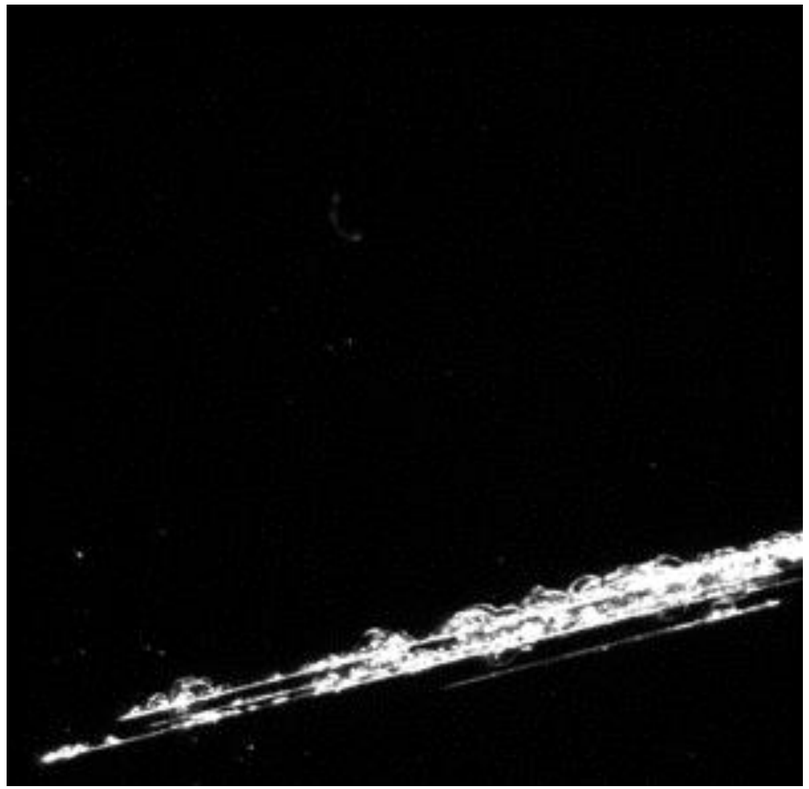

(3) 裂缝

缺陷照片的采集

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(4) 玻璃边缘碎裂

缺陷照片的采集

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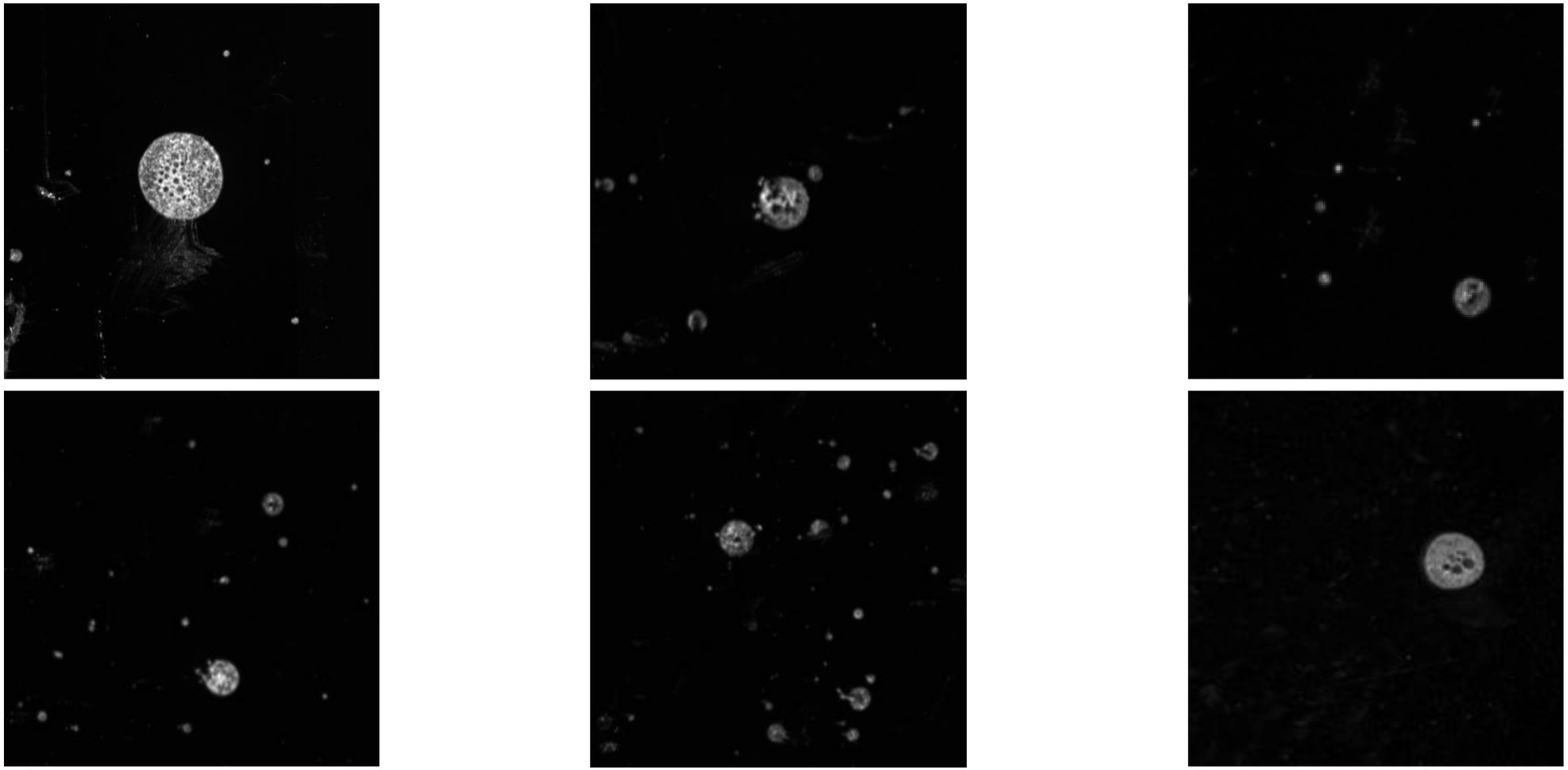

(5) 灰尘与污垢

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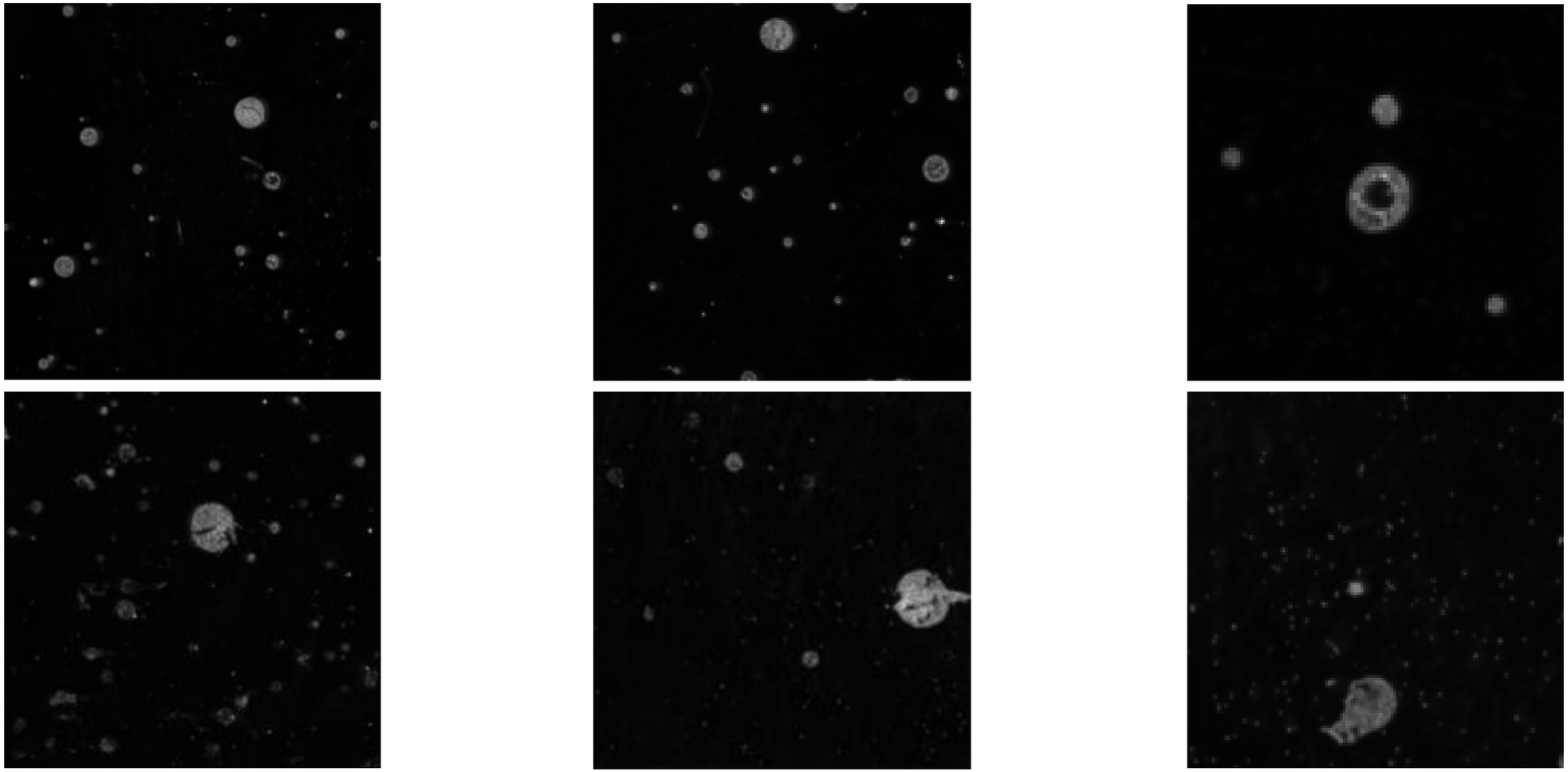

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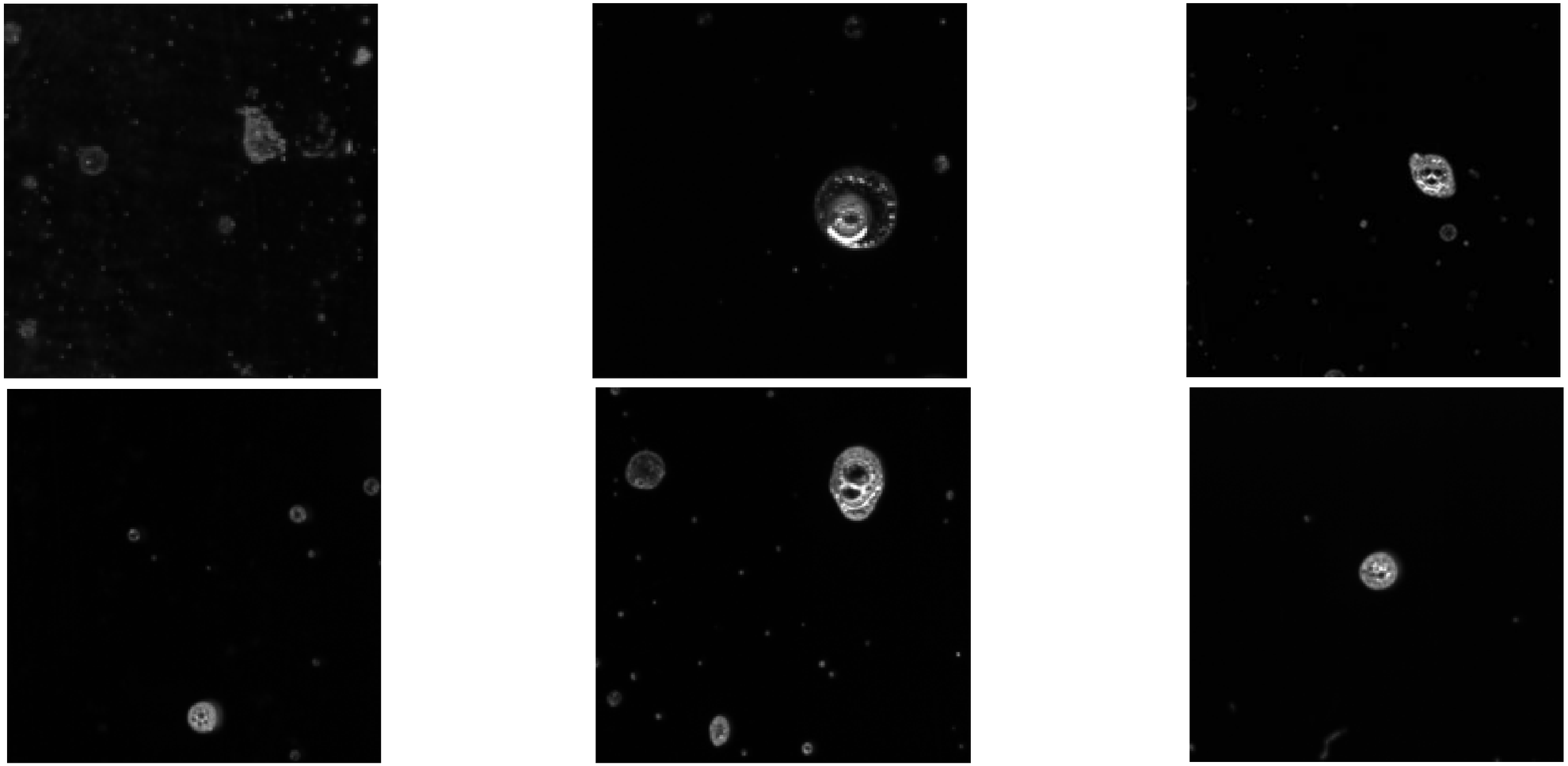

(5) 灰尘与污垢

缺陷检测结果比较

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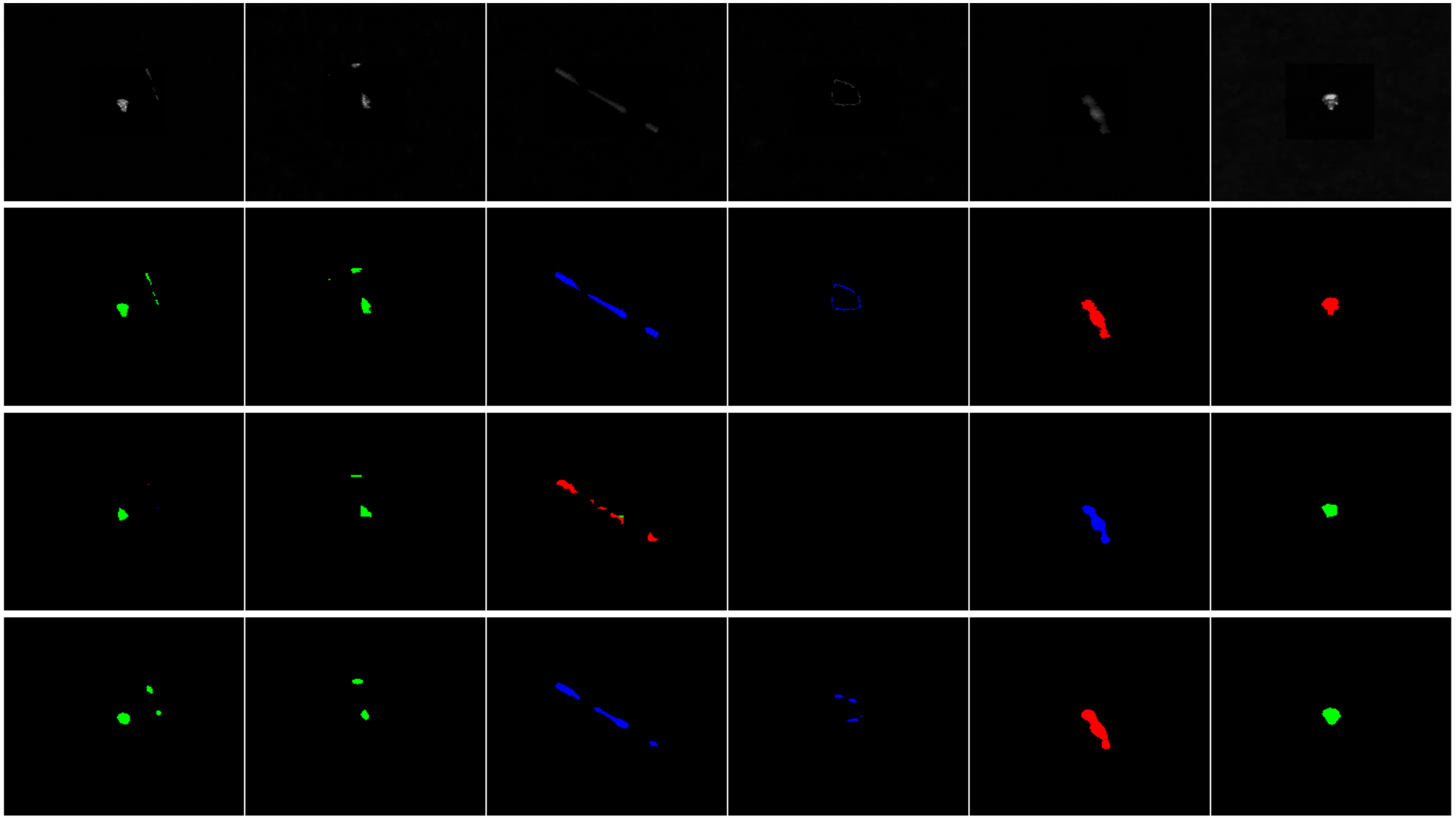
输入图片

人眼的分割结果

别的算法的检测结果

我们算法的检测结果



(蓝色: 刮痕　　绿色: 坑　　红色: 灰尘与污垢)

感谢！