

1. 本文提出的方法在 Avizo 软件平台上进行了验证。实验结果表明，本文提出的方法在保持高分辨率的同时，能够有效去除噪声并增强边缘信息。与传统的超分辨率方法相比，本文提出的方法在保持边缘清晰度的同时，能够更好地保留岩石的孔隙结构信息。

表 1. 不同方法在 HR-Watershed 数据集上的性能对比。

方法	宏孔隙率 (macroporosity)	微孔隙率 (microporosity)
HR-Watershed	1781/0 (0.00%)	1266/0 (0.00%)
EDSR-UResNet	1881/0 (61/5 %)	1413/0 (61/11 %)
dBMSDR-UNet3Plus	1802/0 (18/1 %)	1289/0 (82/1 %)

表 2. 不同方法在 HR-Watershed 数据集上的性能对比。

方法	宏孔隙率 (macroporosity)	微孔隙率 (microporosity)
HR-Watershed	1058 (0.00%)	1359 (0.00%)
EDSR-UResNet	1424 (61/34 %)	1526 (32/12 %)
dBMSDR-UNet3Plus	1140 (74/7 %)	1252 (78/7- %)

4.

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Primary author: BAKHTIARY, Mohammad

Co-author: QAJAR, Jafar (Department of Petroleum Engineering, Shiraz University)

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