

Supplemental Materials

MatMorpher: A Morphing Operator for SVBRDFs

1 Comparison with [MZD05]

We compare our method to [MZD05] for RGB texture interpolation (Figure 1 to 4). The first row of each figure corresponds to [MZD05] : we show the feature maps used, the result of the warpgrid computation and the final interpolation. Our method is shown second row, with the contours used for the transport grid and the final interpolation result.

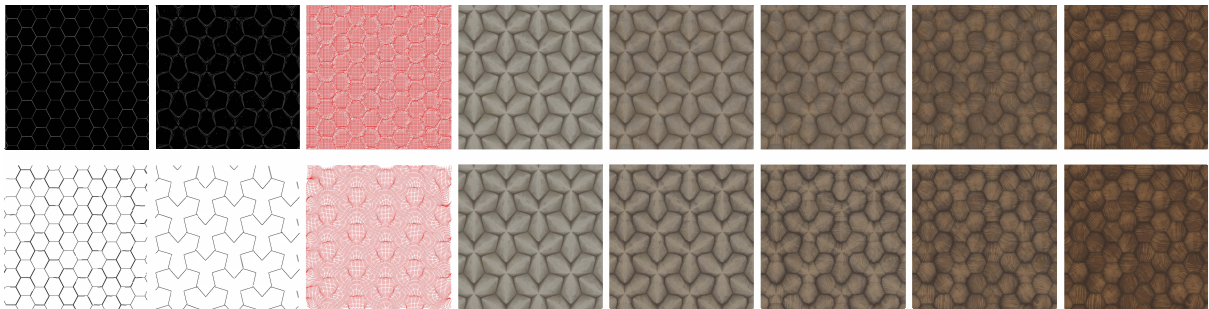


Figure 1: Comparison between [MZD05] (top) and our technique (bottom)

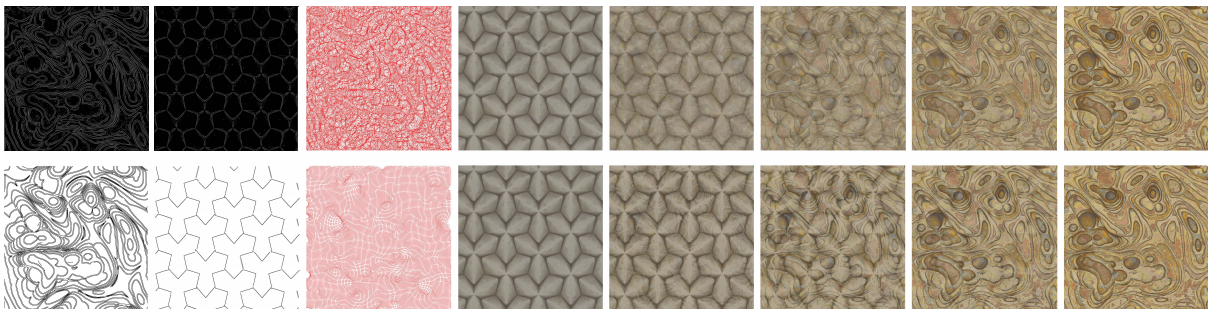


Figure 2: Comparison between [MZD05] (top) and our technique (bottom)

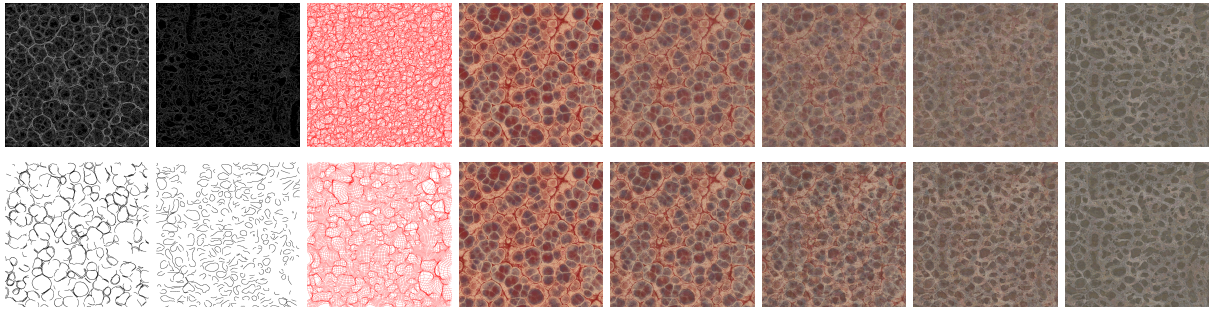


Figure 3: Comparison between [MZD05] (top) and our technique (bottom)

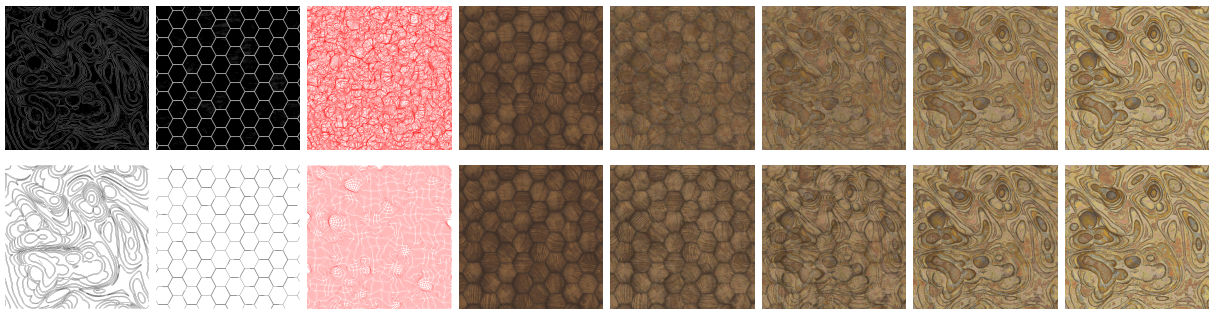


Figure 4: Comparison between [MZD05] (top) and our technique (bottom)

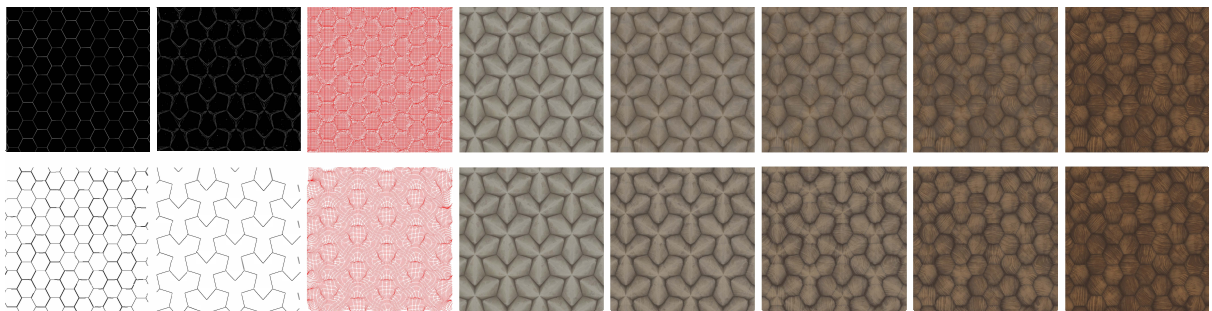
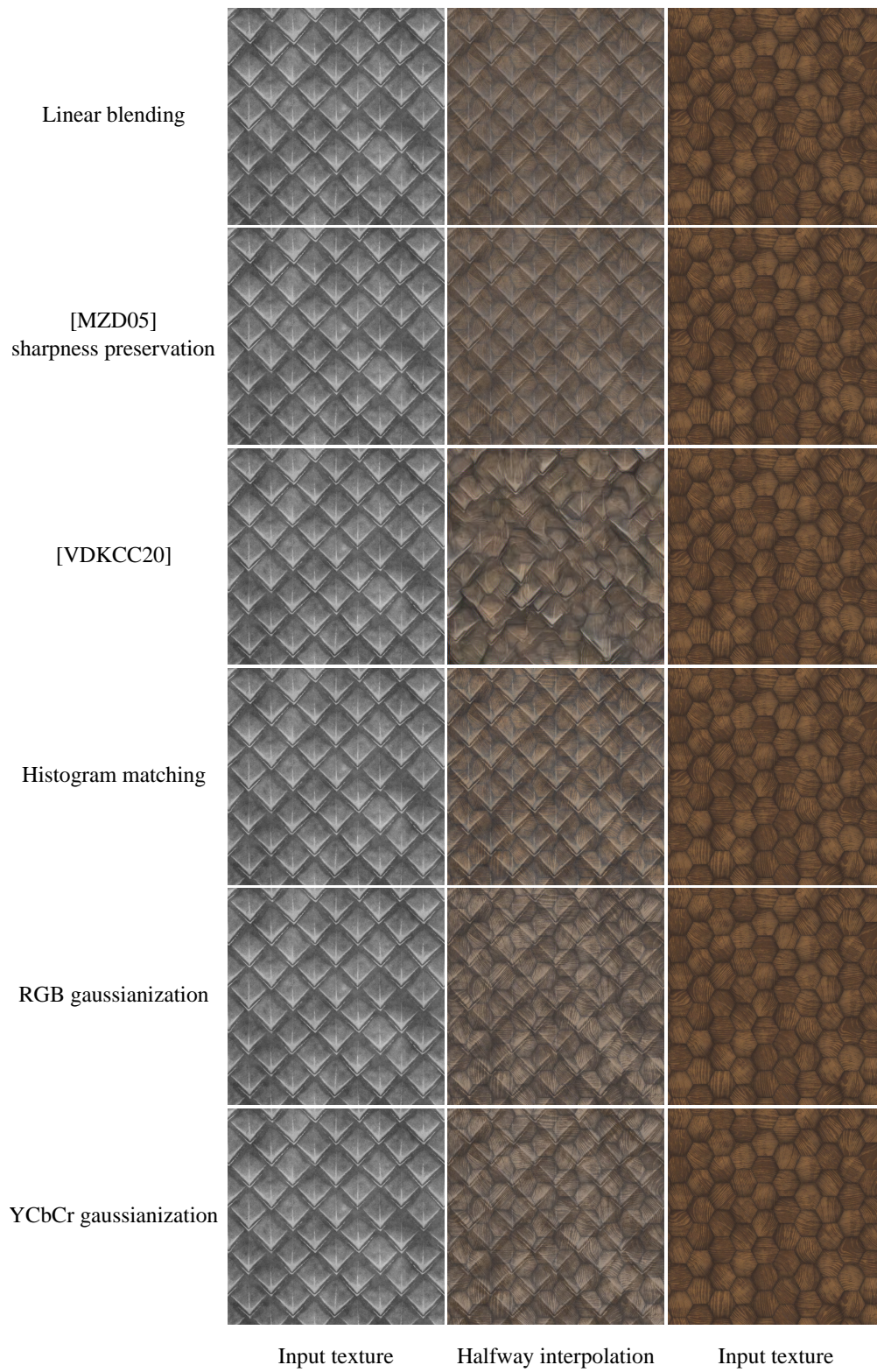
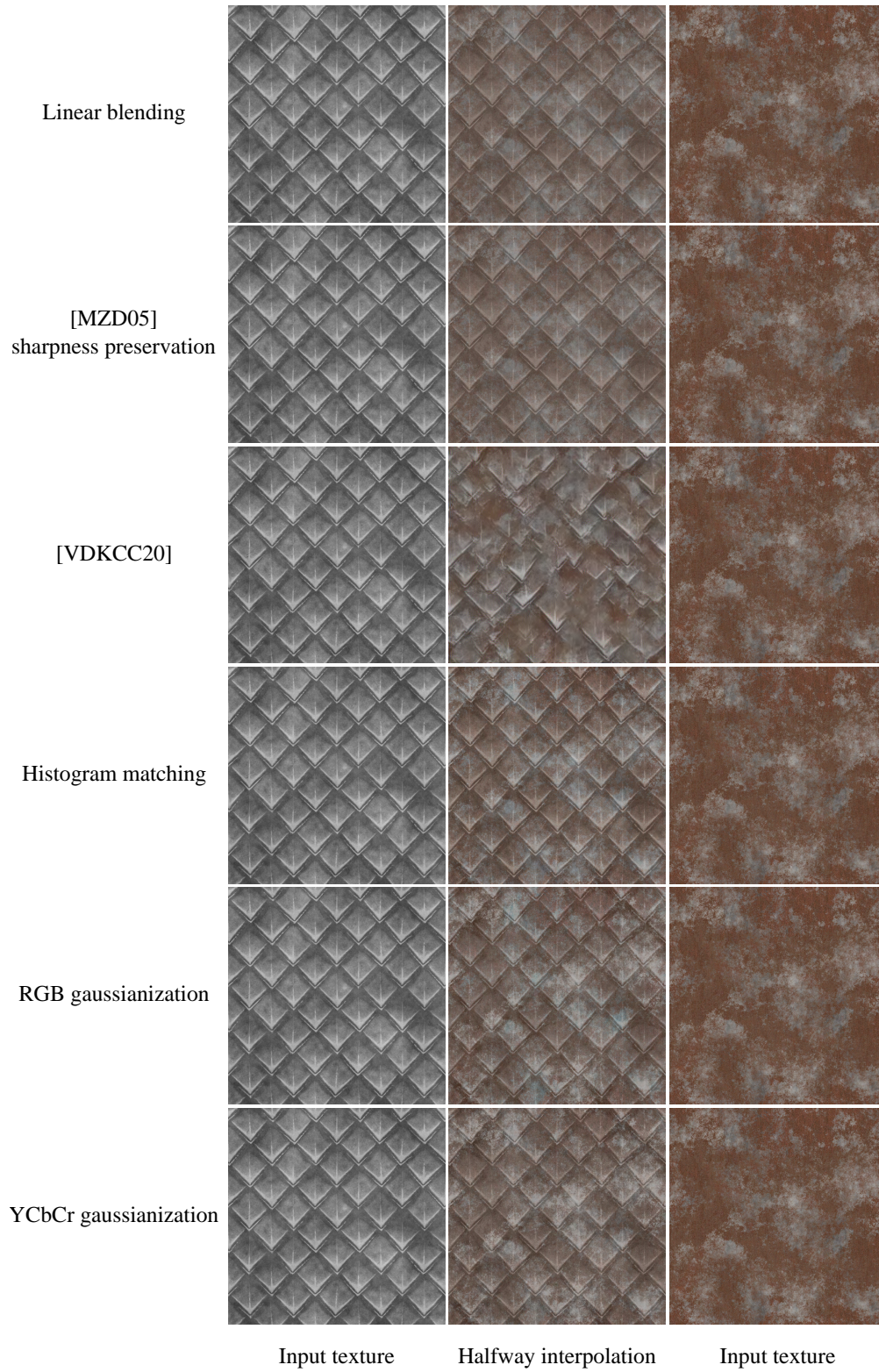


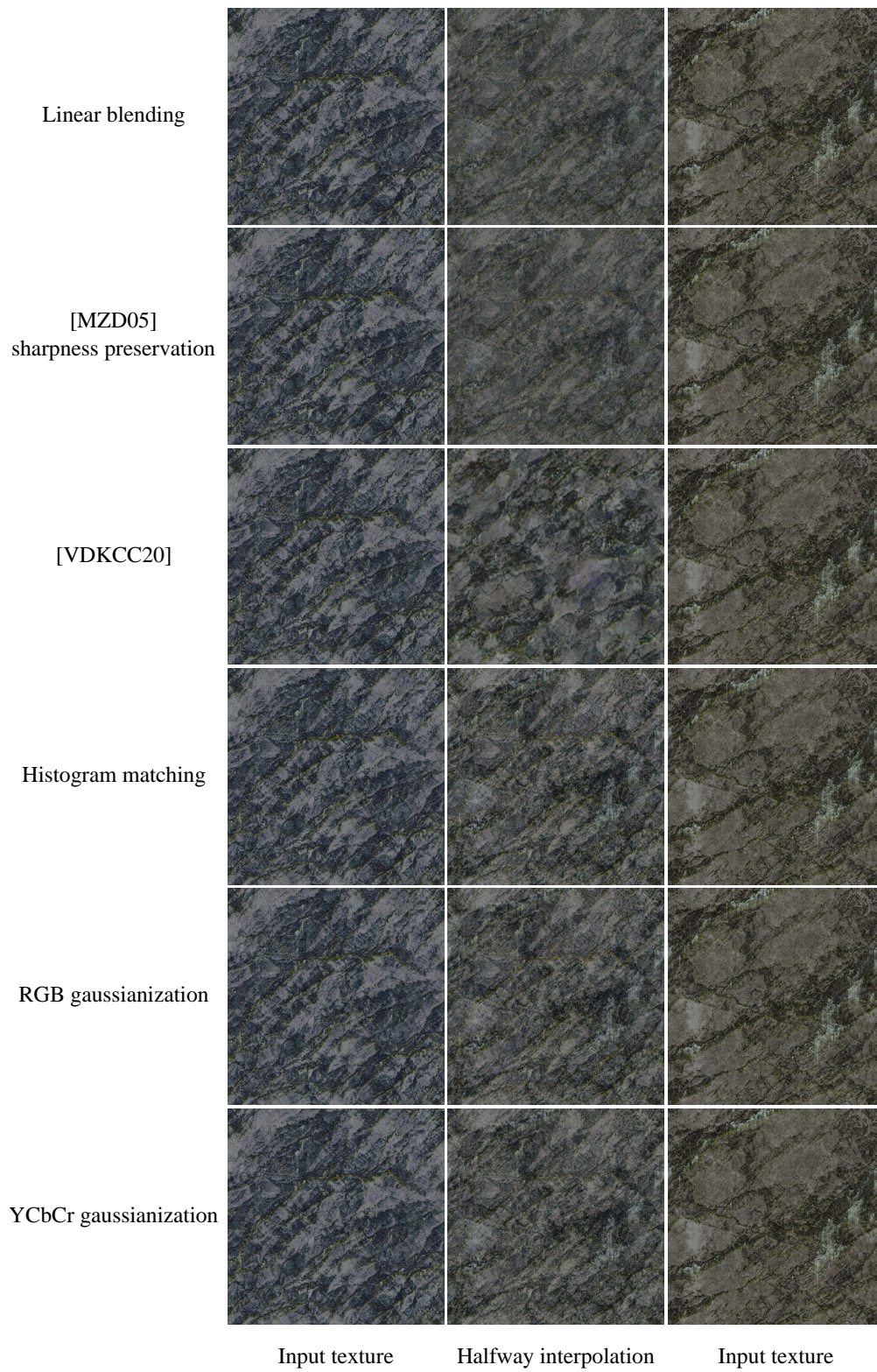
Figure 5: Comparison between [MZD05] (top) and our technique (bottom)

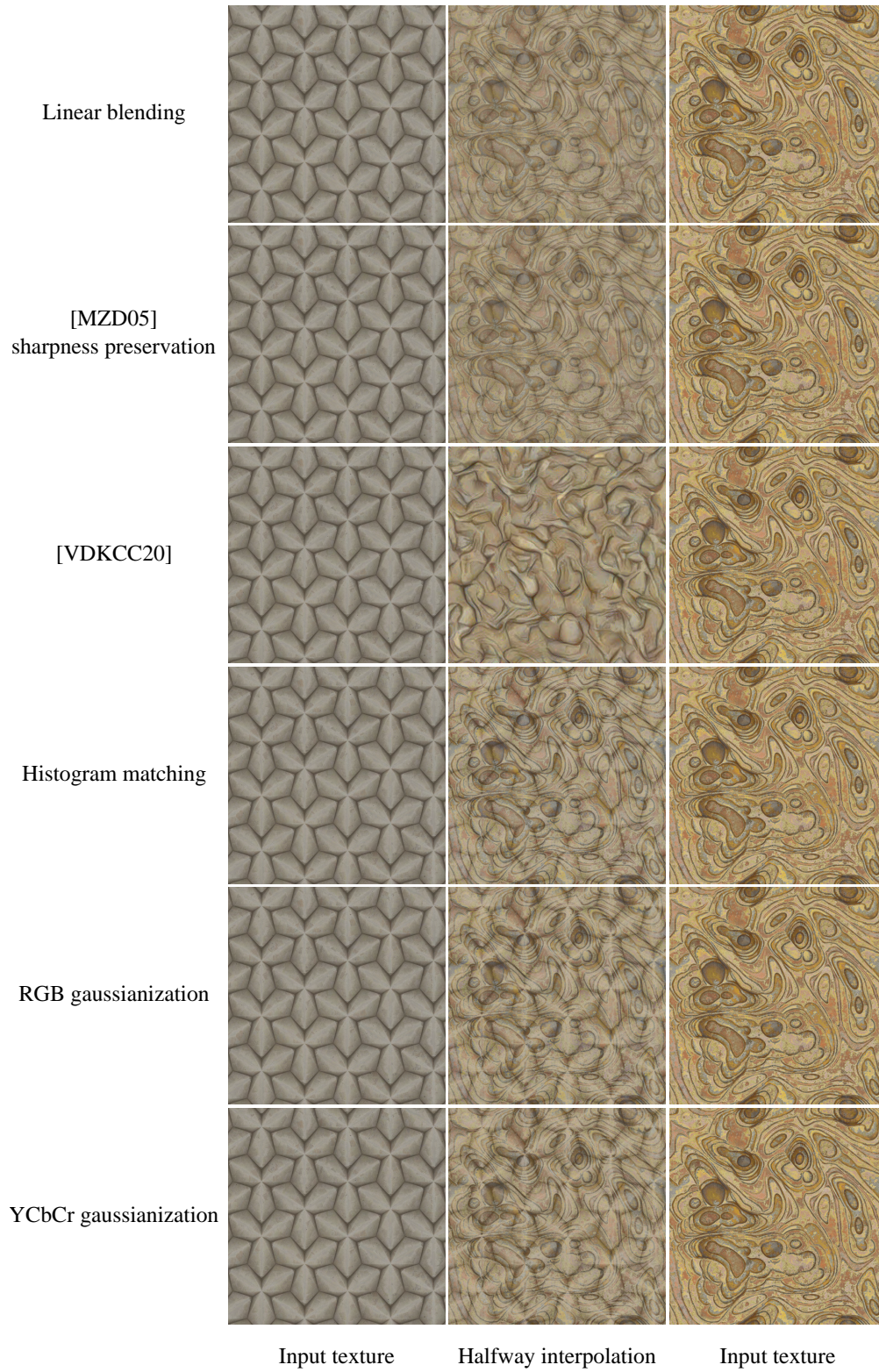
2 Comparison with RGB albedo interpolation

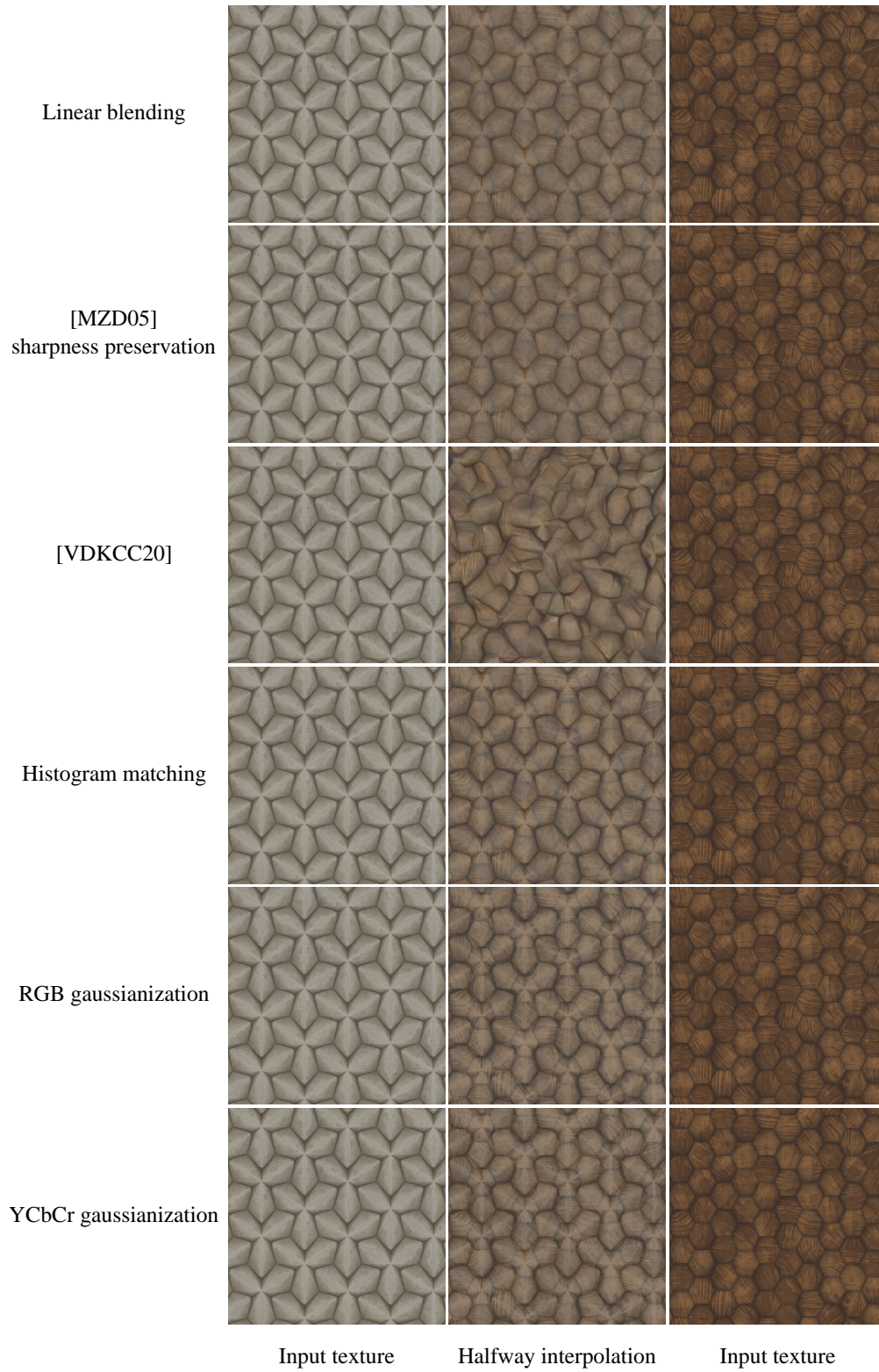
We also compare the results of multiple RGB texture interpolation techniques (without warping) to our albedo gaussianization. The comparison consists in simple linear blending, the sharpness preservation technique of [MZD05] using decomposition of steerable pyramids, the deep learning technique of [VDKCC20], histogram matching between color distribution of interpolated textures, and finally our gaussianization in both RGB and YCbCr spaces.

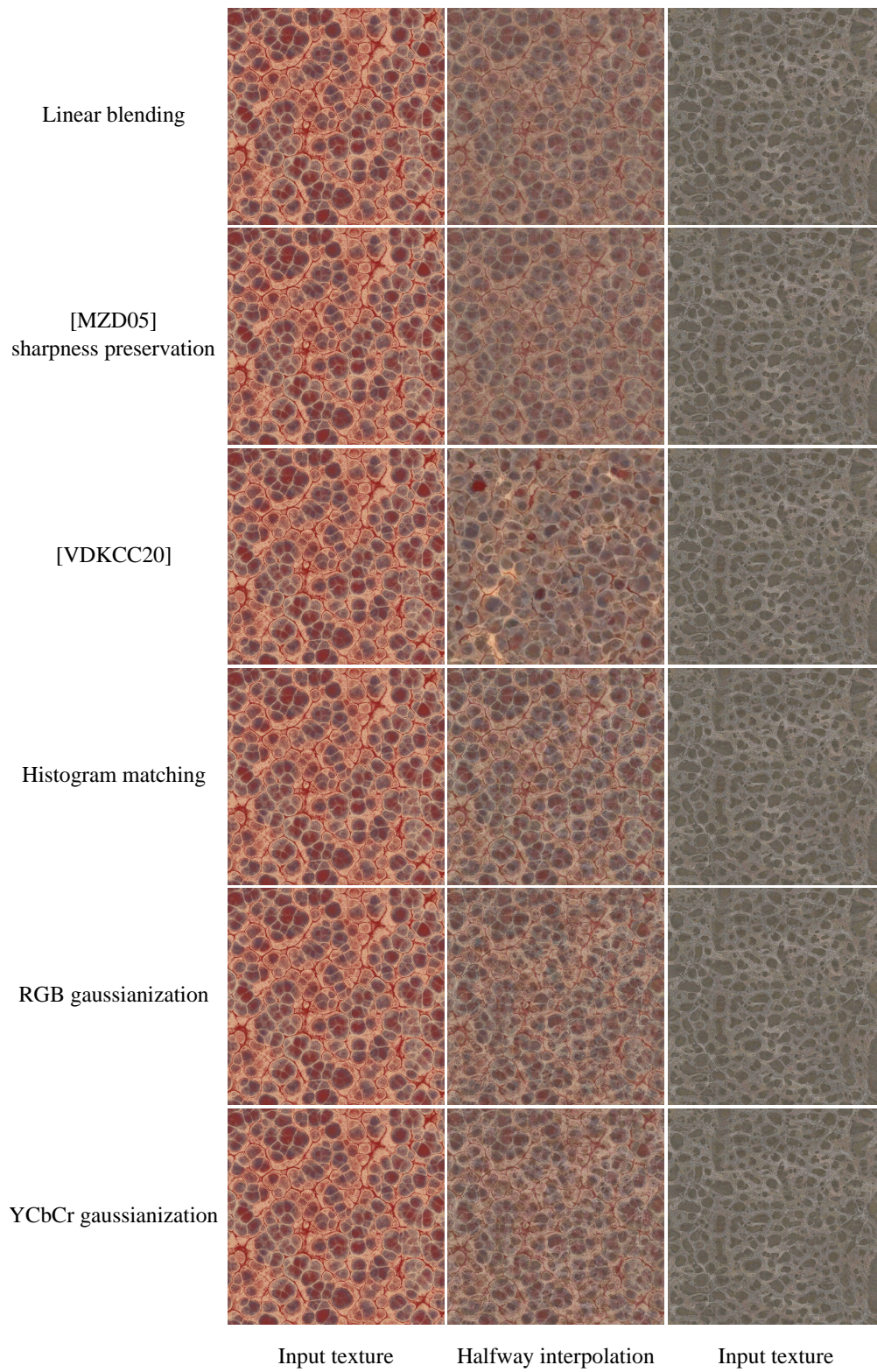


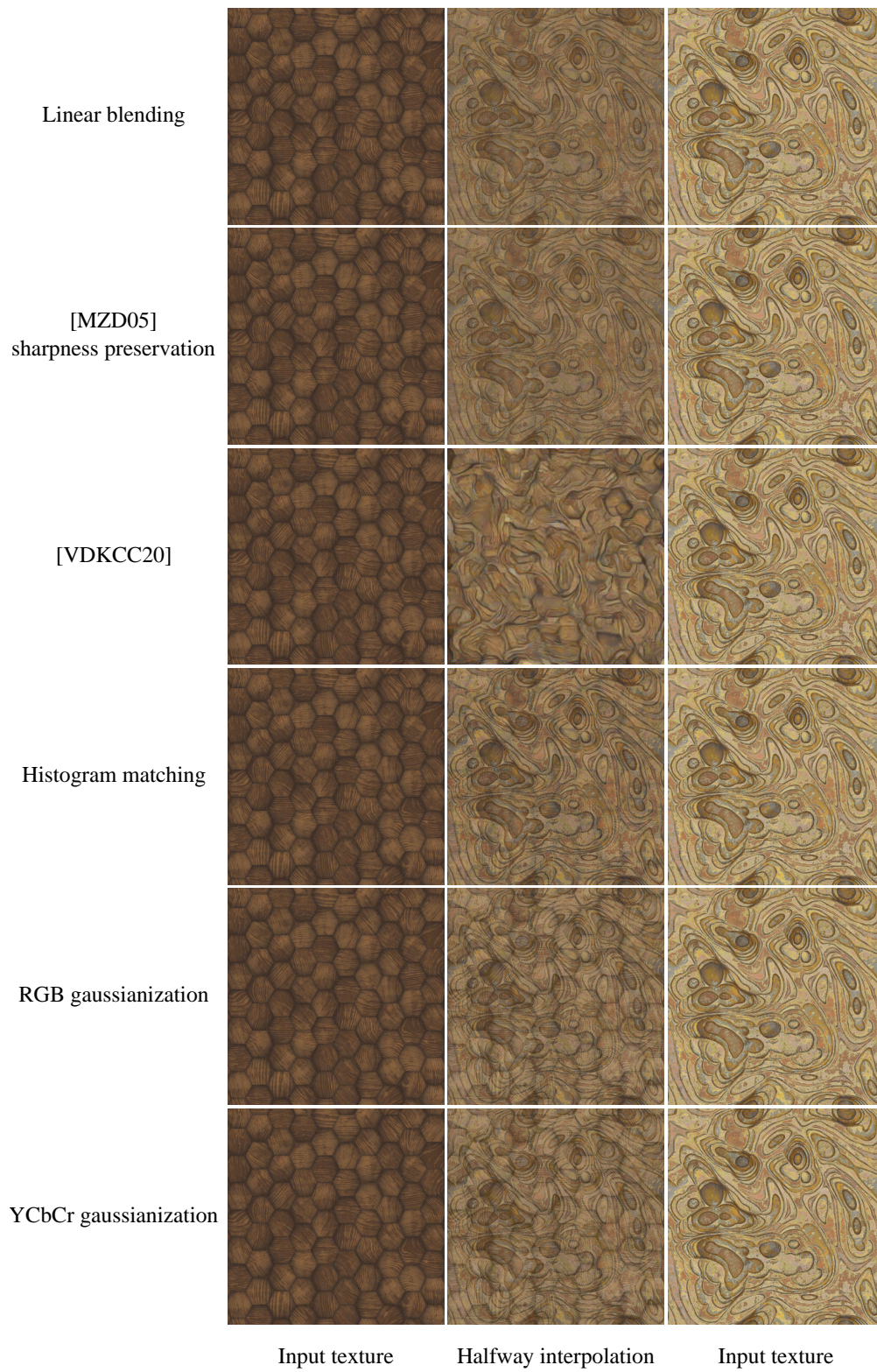


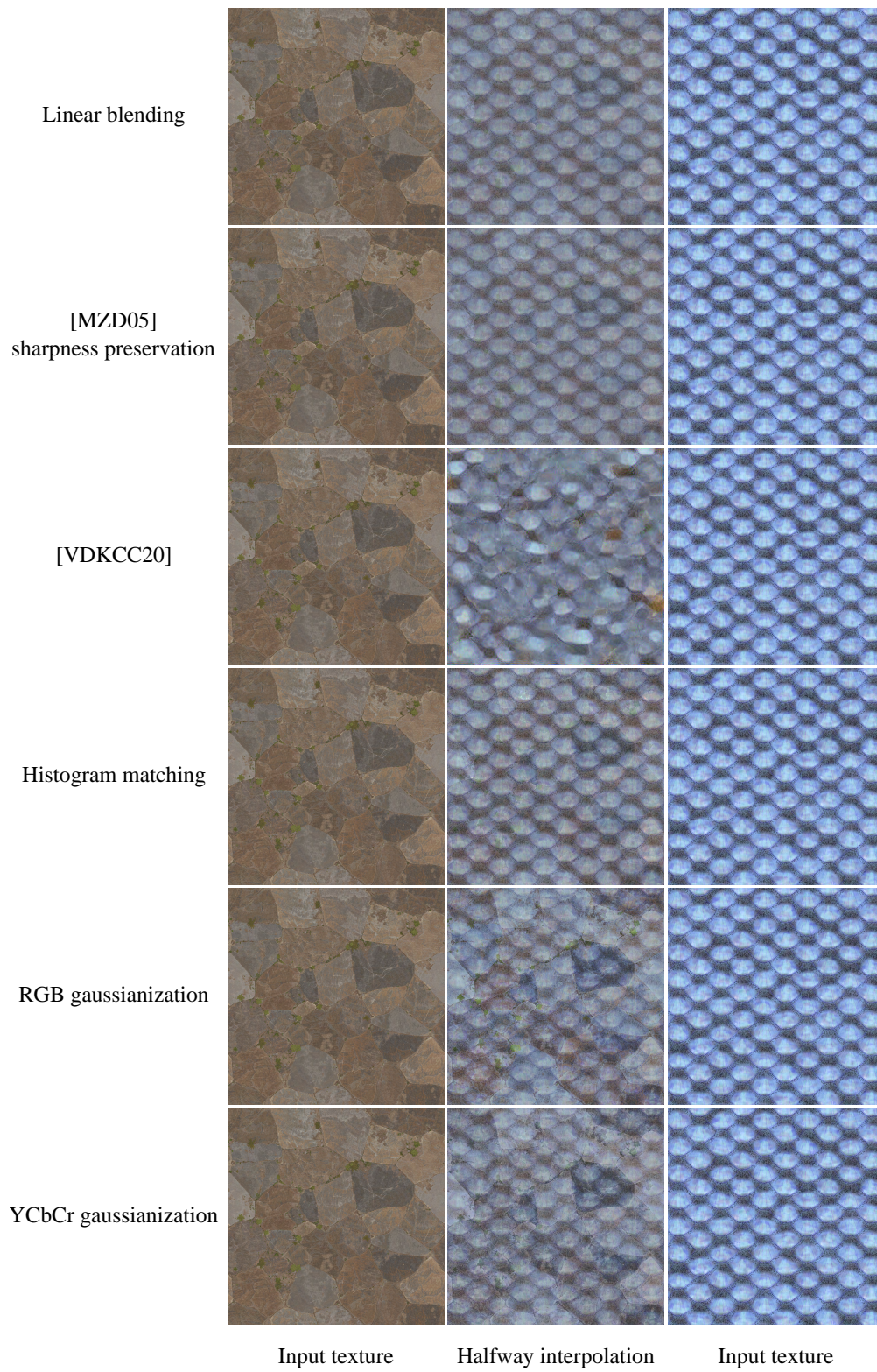












3 Comparison with [GSH20]

Here we show 4 results of [GSH20] compared to linear texture interpolation using their codebase (Figure 6 to 9).

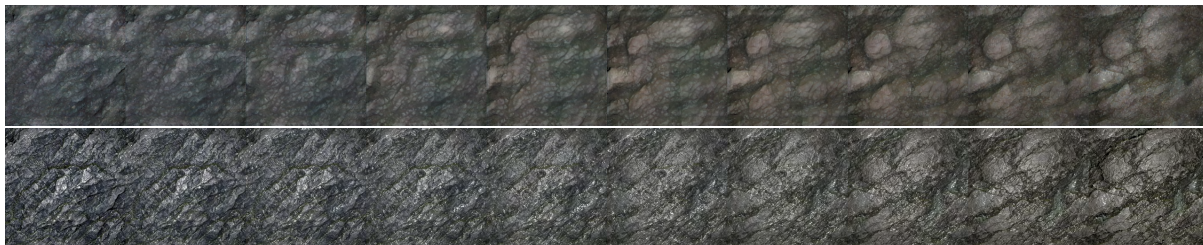


Figure 6: MaterialGAN: Comparison between latent space (top) and linear interpolation (bottom)



Figure 7: MaterialGAN: Comparison between latent space (top) and linear interpolation (bottom)



Figure 8: MaterialGAN: Comparison between latent space (top) and linear interpolation (bottom)

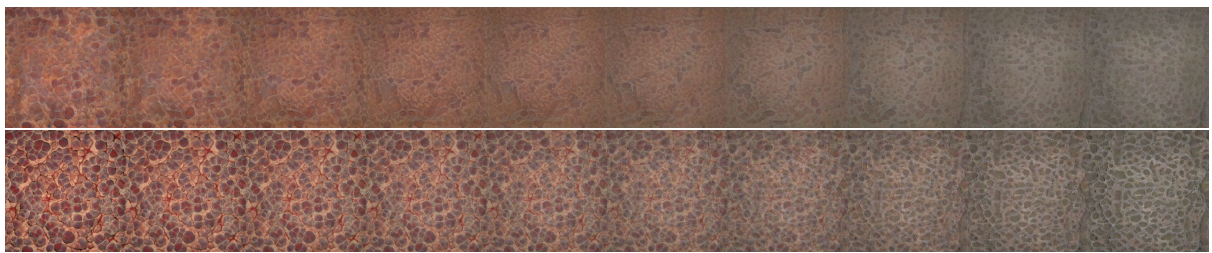


Figure 9: MaterialGAN: Comparison between latent space (top) and linear interpolation (bottom)

4 Progressive degradation of the contour detection

In this last section, we provide an illustration of how the morphing quality progressively degrades when contours are more and more missed by artificially bounding the performance of the contour detector.

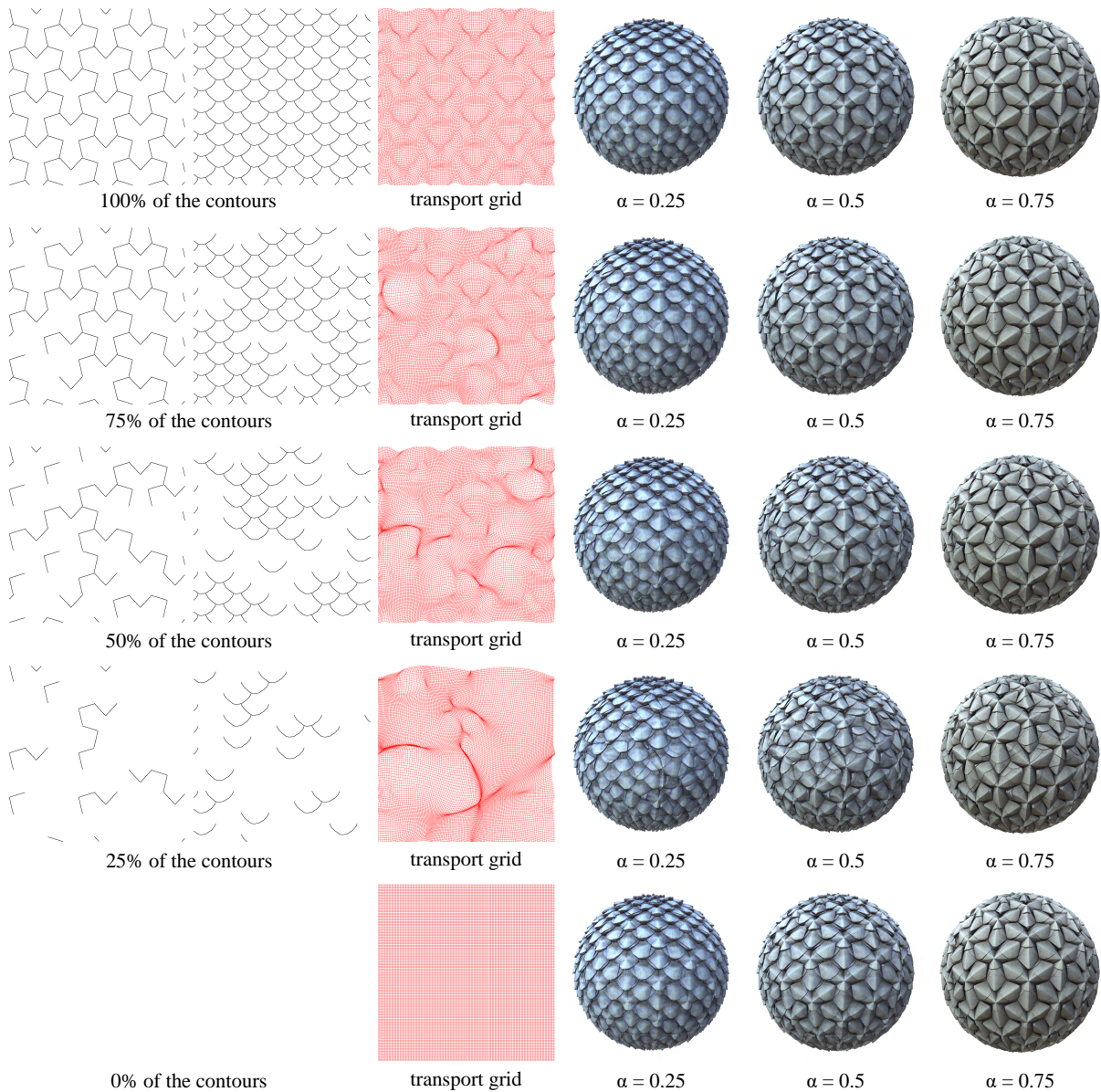


Figure 10: Progressive contour degradation. In this experiment, we randomly select a proportion of contours and compute a transport grid from this selection.

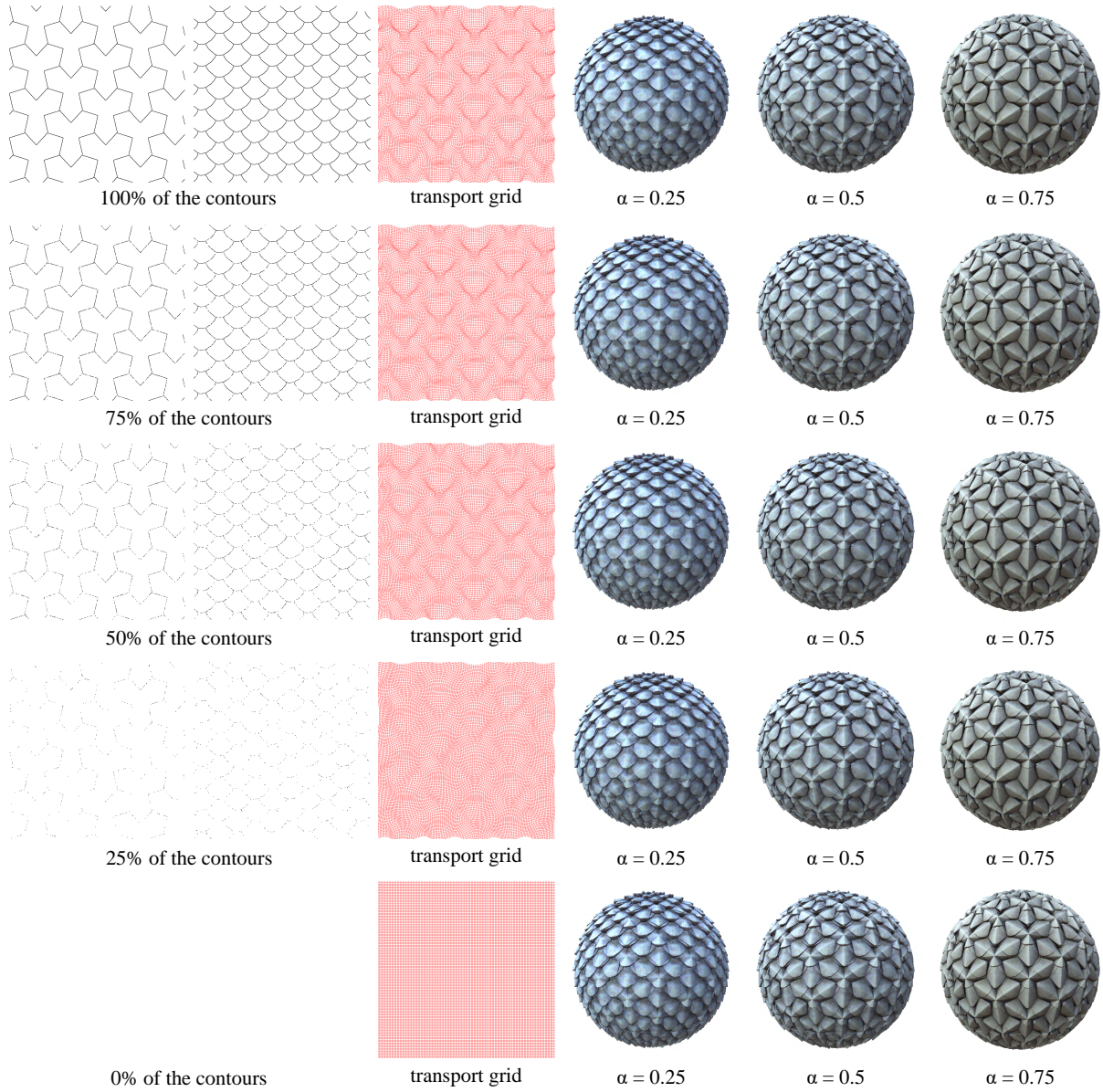


Figure 11: Progressive contour degradation. In this experiment, we randomly select a proportion of contours points and compute a transport grid from this selection.