Figure 1. Randomly sampled defect samples generated by StyleGAN v2 w/ DiffAug: Although it is able to generate some visually realistic defect samples, a lot of the generated samples still do not contain any defects, which verifies the limitation in model's capacity to capture and model the complex and irregular textures of defects.

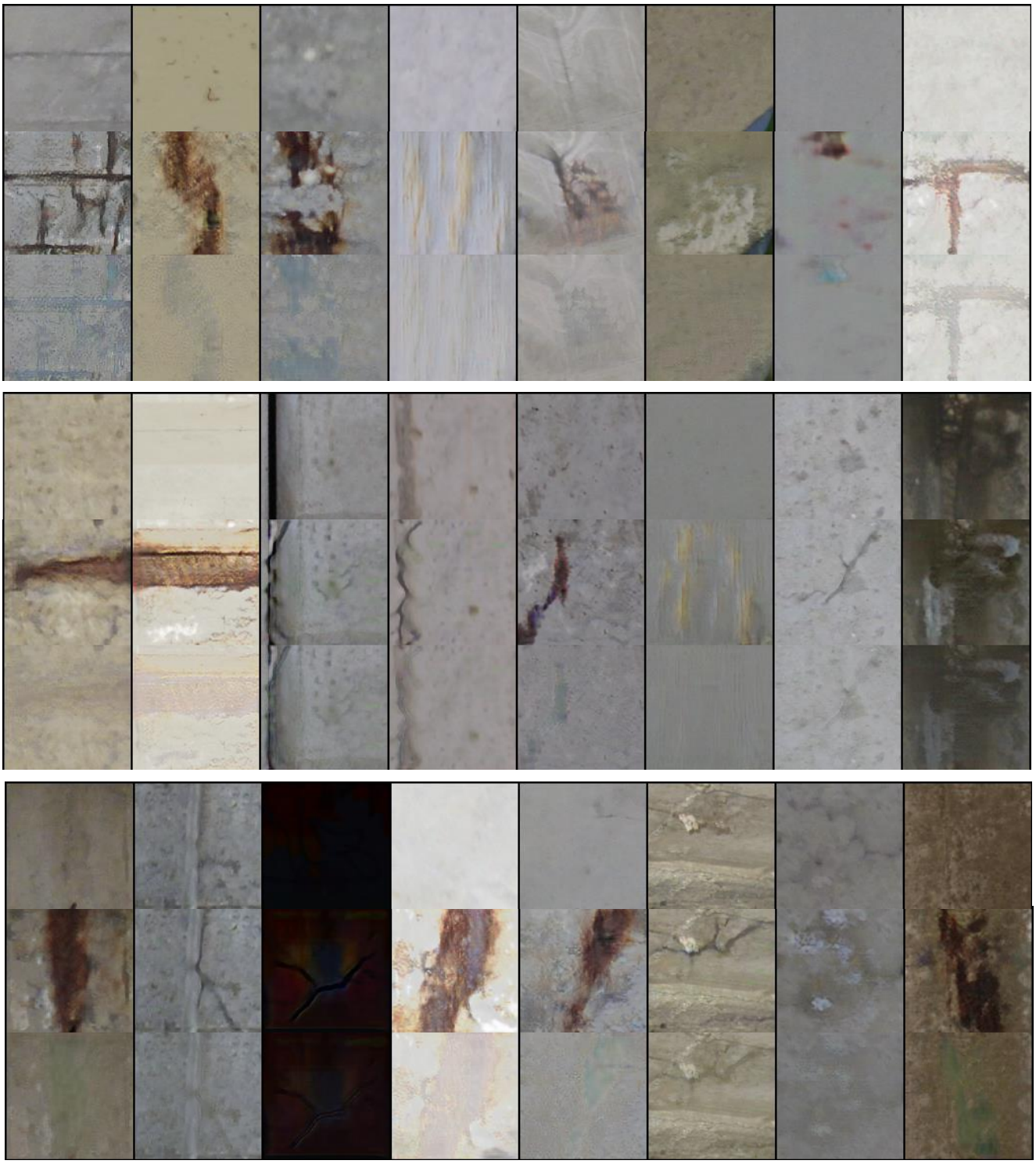

Figure 2. Additional results of the proposed Defect-GAN to mimick the defacement and restoration processes: For each block, the first row contains real normal samples; the second and third row contain generated defect samples and restored normal samples, respectively.

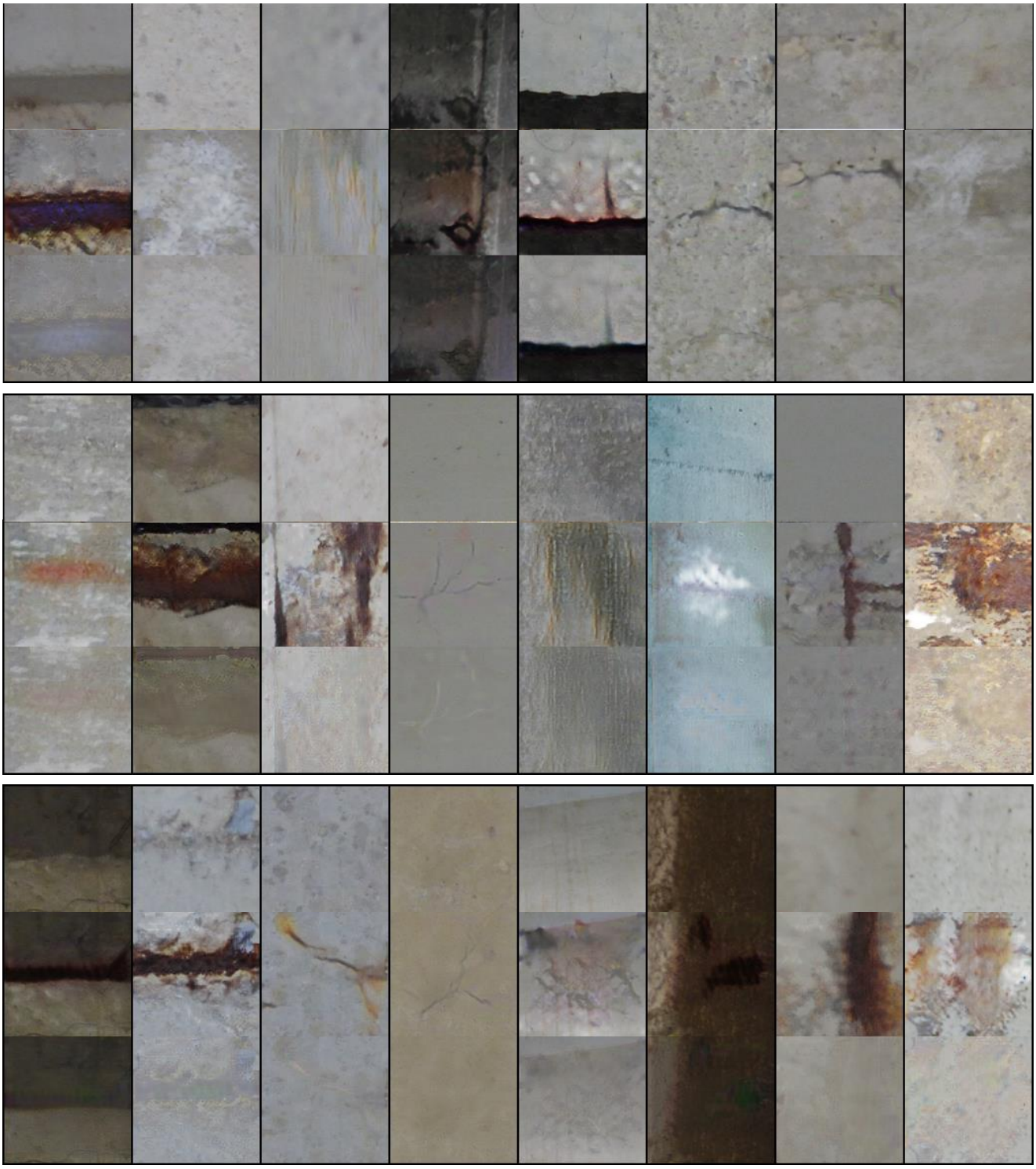

Figure 3. Additional results of the proposed Defect-GAN to mimick the defacement and restoration processes: For each block, the first row contains real normal samples; the second and third row contain generated defect samples and restored normal samples, respectively.

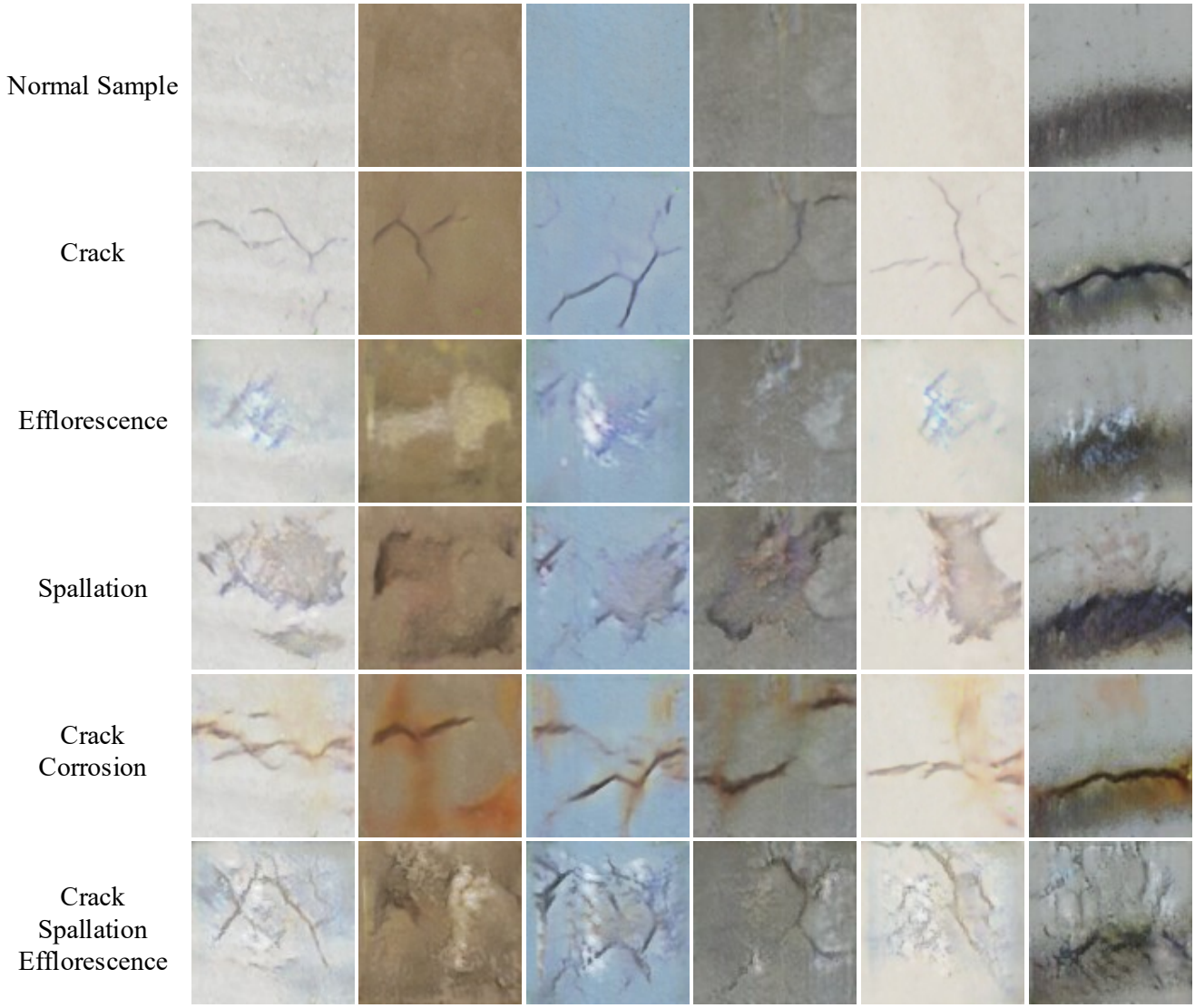

Figure 4. Illustration of categorical control in defect generation by Defect-GAN: For each normal sample in Row 1, Rows 2-6 show the generated defect samples conditioned on target categories, respectively.

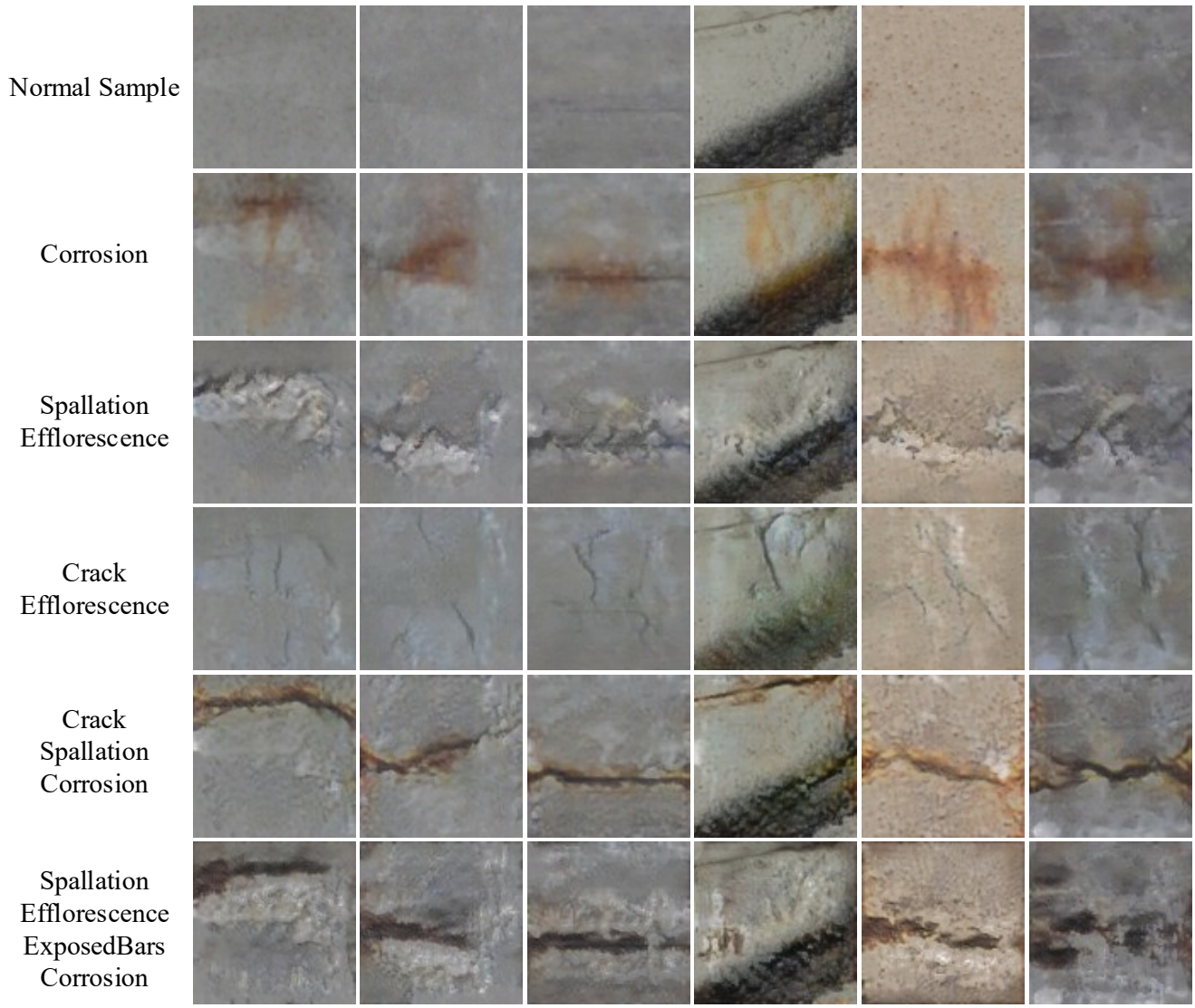

Figure 5. Illustration of categorical control in defect generation by Defect-GAN: For each normal sample in Row 1, Rows 2-6 show the generated defect samples conditioned on target categories, respectively.