

# POSITIONAL ENCODING FIELD –SUPPLEMENTARY MATERIALS–

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Paper under double-blind review



Figure 1: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, ViewCrafter produces only a small rotation with hand distortions and skin color changes, GEN3C introduces facial distortions.

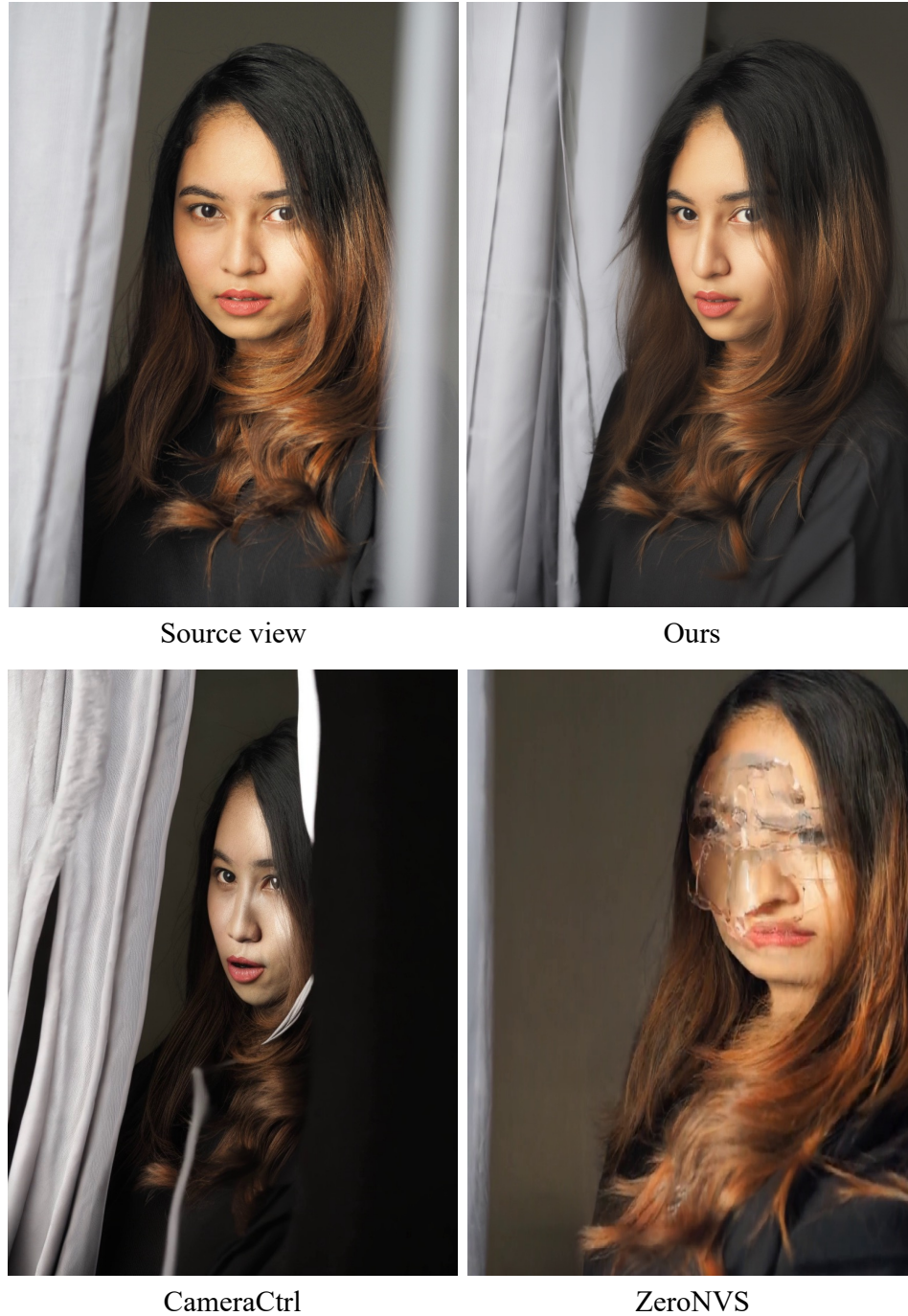


Figure 2: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, CameraCtrl and ZeroNVS both cause facial distortions.





Figure 3: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, See3D yields inaccurate viewpoint changes and significantly alters the original appearance, MVGenMaster fails to complete reasonable content for the human face.



Figure 4: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, ViewCrafter produces only a small rotation with hand distortions and skin color changes, GEN3C introduces facial distortions.





Figure 5: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, CameraCtrl and ZeroNVS both cause facial distortions.





Source view

Ours



See3D

MVGenMaster

Figure 6: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, See3D and MVGenMaster both introduce distortions in the human face and shoes.

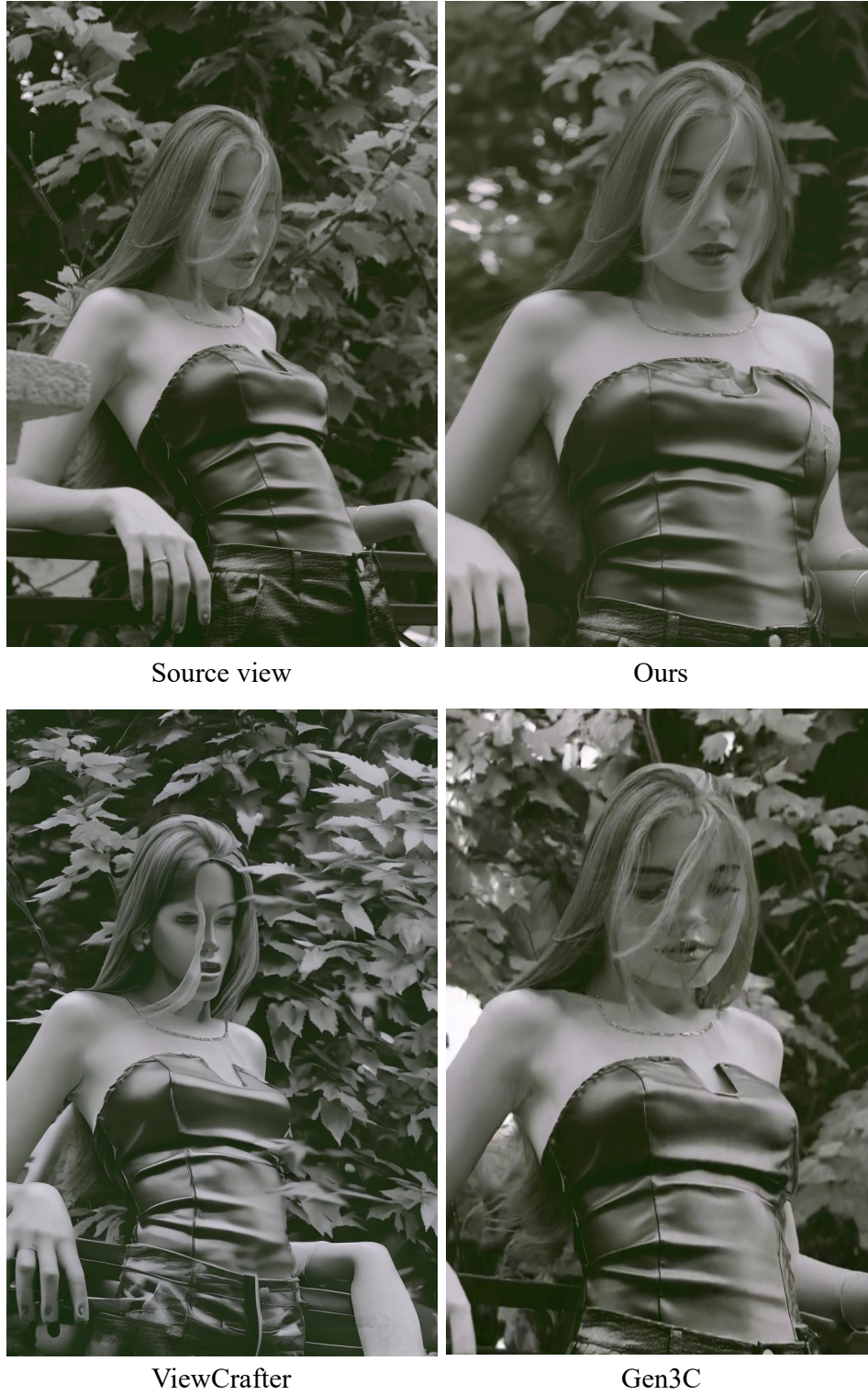


Figure 7: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the  $30^\circ$  rightward rotation, ViewCrafter produces only a small rotation but completely distorts the face, GEN3C introduces facial distortions.



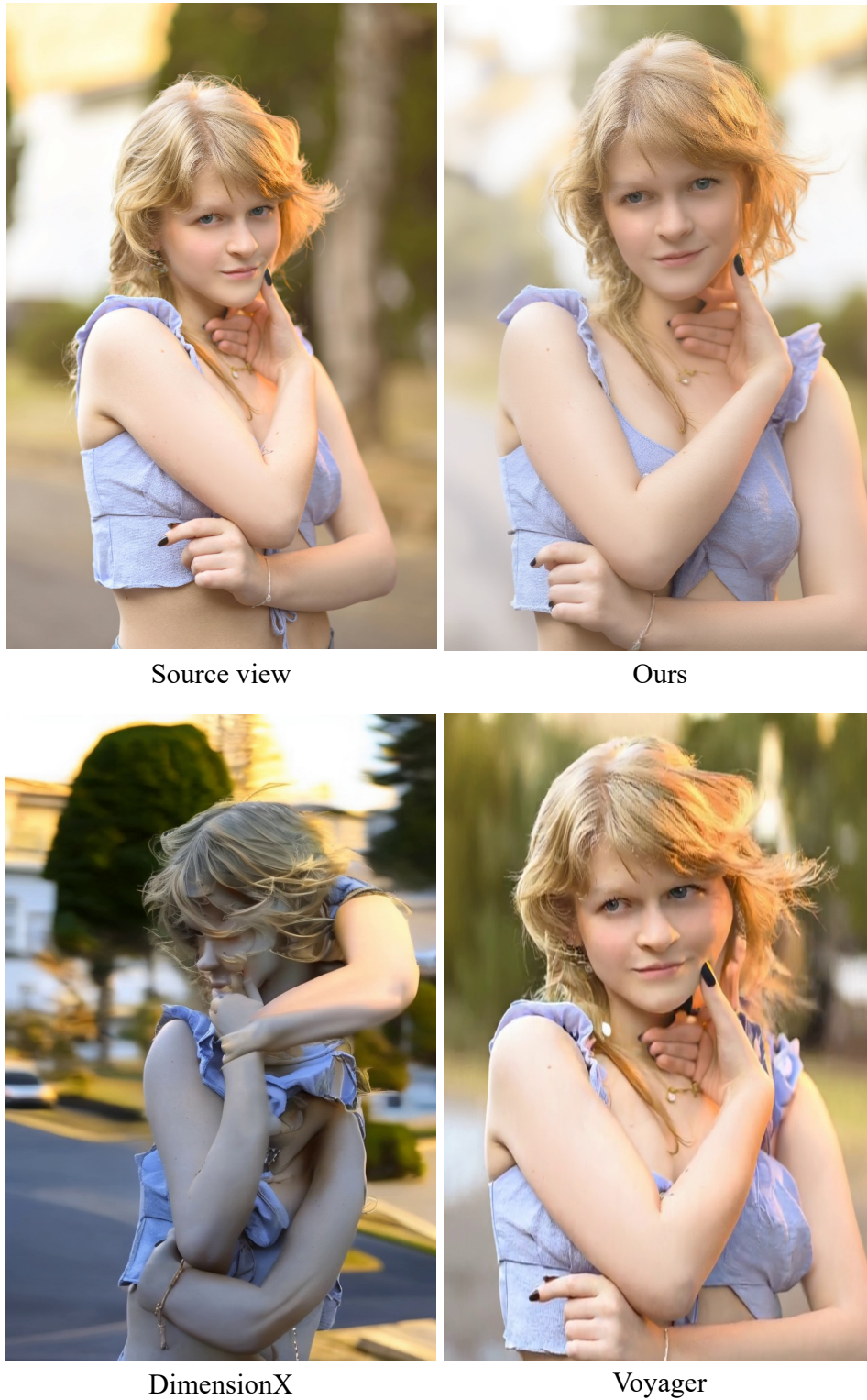


Figure 8: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, DimensionX completely distorts the human figure, Voyager introduces facial distortions.





Source view

Ours



SEVA

FlexWorld

Figure 9: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, SEVA completely distorts the human face, FlexWorld introduces facial distortions.



Source view

Ours



ViewCrafter

Gen3C

Figure 10: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, ViewCrafter completely distorts the human figure, GEN3C introduces facial artifacts.



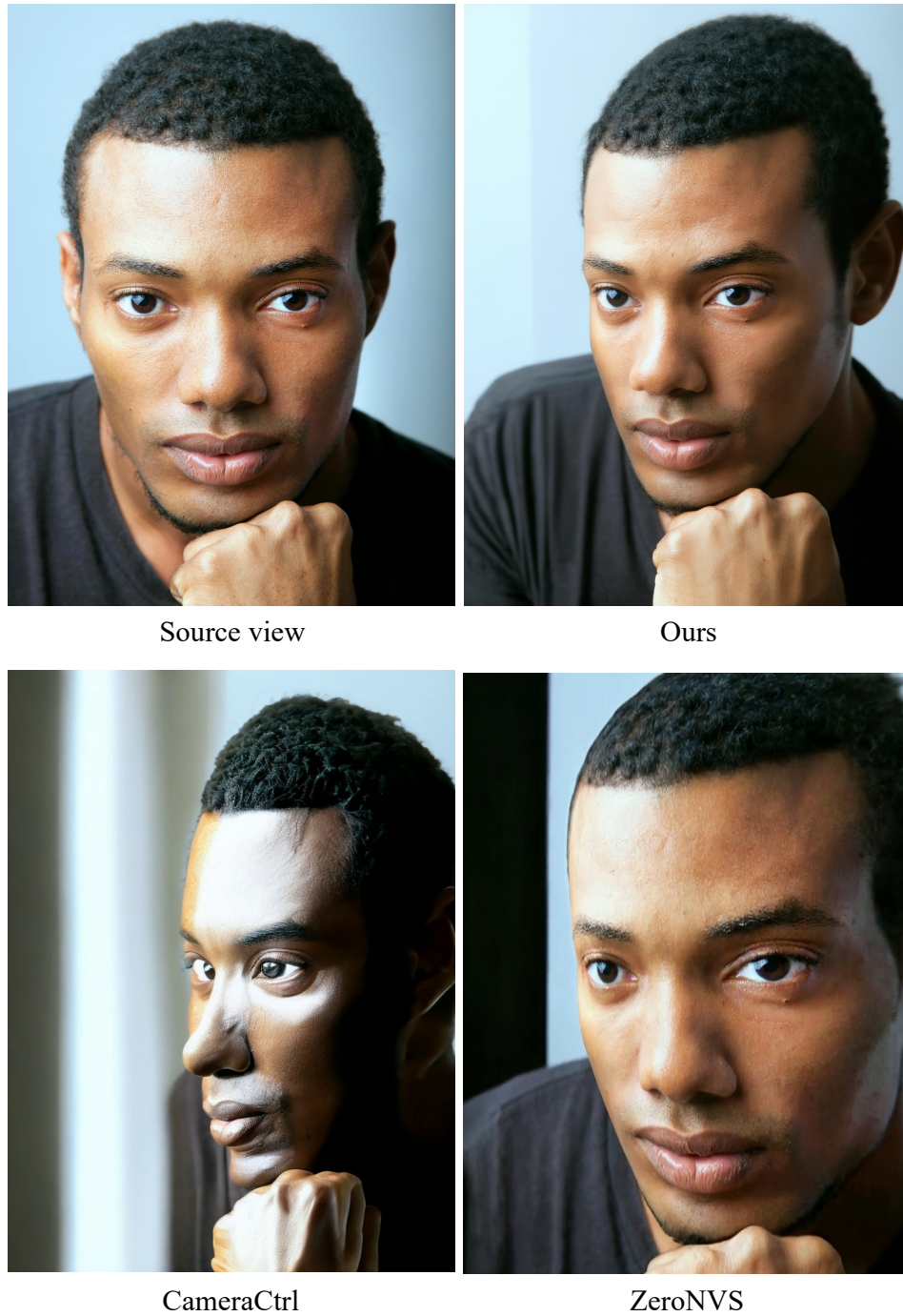


Figure 11: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, CameraCtrl and ZeroNVS both cause facial distortions.





Figure 12: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° leftward rotation, NVS-Solver shows little change but introduces some distortions, GenWarp produces blurred results.



Figure 13: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° leftward rotation, See3D distorts the scene, and MVGenMaster adds noise to the results.





Figure 14: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the  $30^\circ$  leftward rotation, NVS-Solver introduces distortions on the sheep and alters the overall color tone, GenWarp produces smaller changes but still distorts the sheep.





Figure 15: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the  $30^\circ$  leftward rotation, DimensionX and Voyager both alter the shape of the flowers.

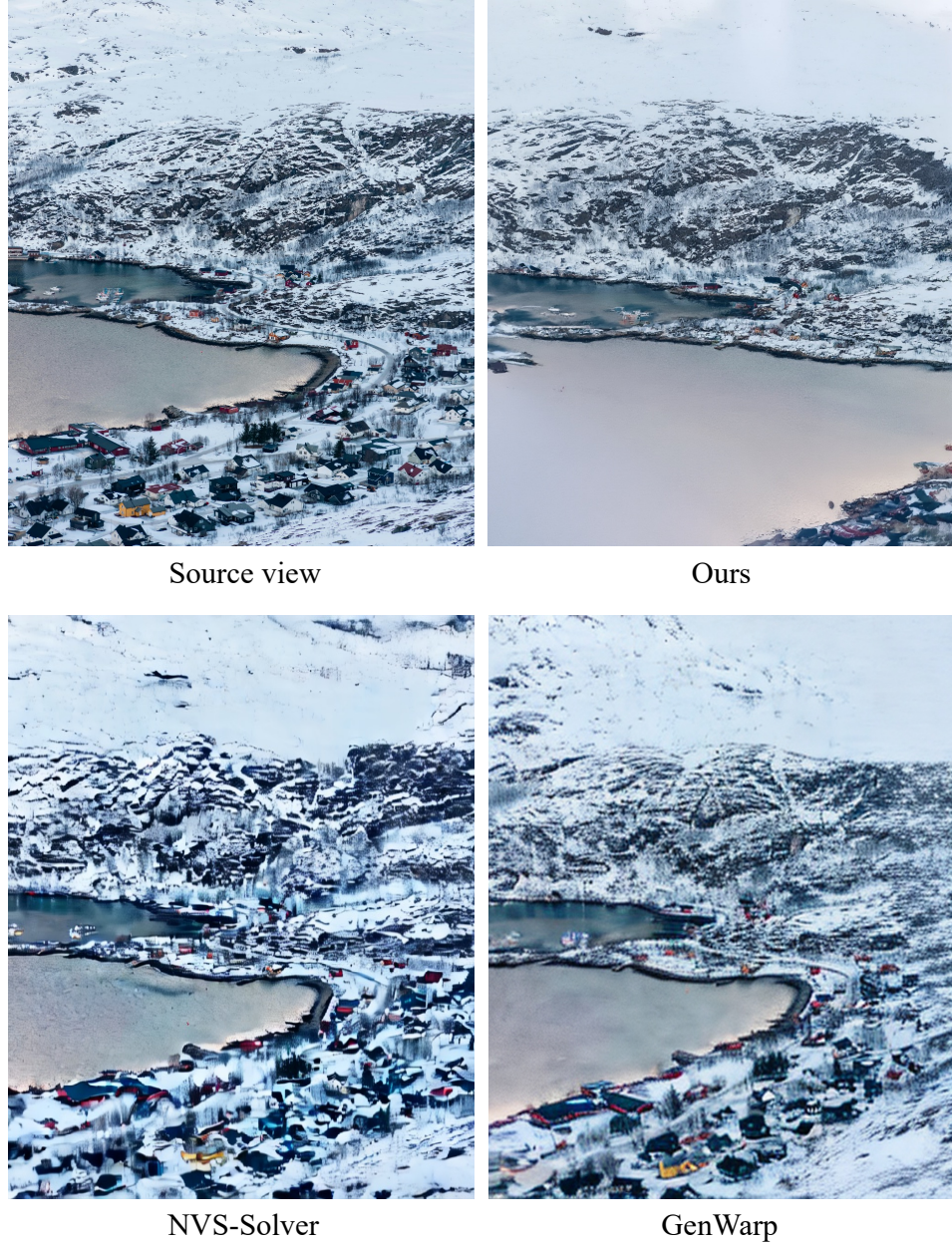


Figure 16: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the  $30^\circ$  leftward rotation, NVS-Solver and GenWarp show little change but generate blurred images.





Source view

Ours



NVS-Solver

GenWarp

Figure 17: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° leftward rotation, NVS-Solver and GenWarp both introduce object distortions and produce blurred results.



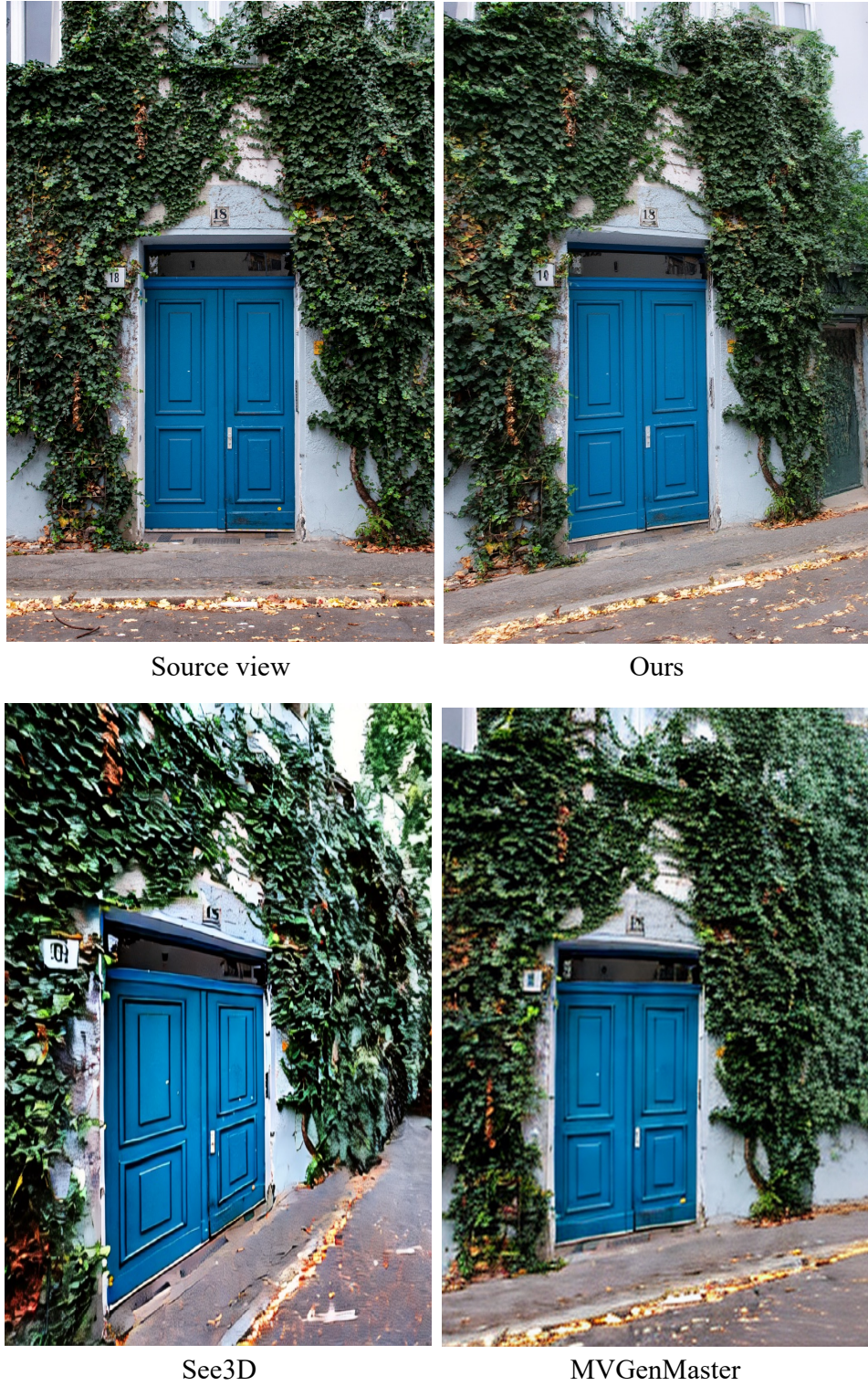


Figure 18: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the  $30^\circ$  leftward rotation, See3D distorts the scene, and MVGenMaster adds noise to the results.



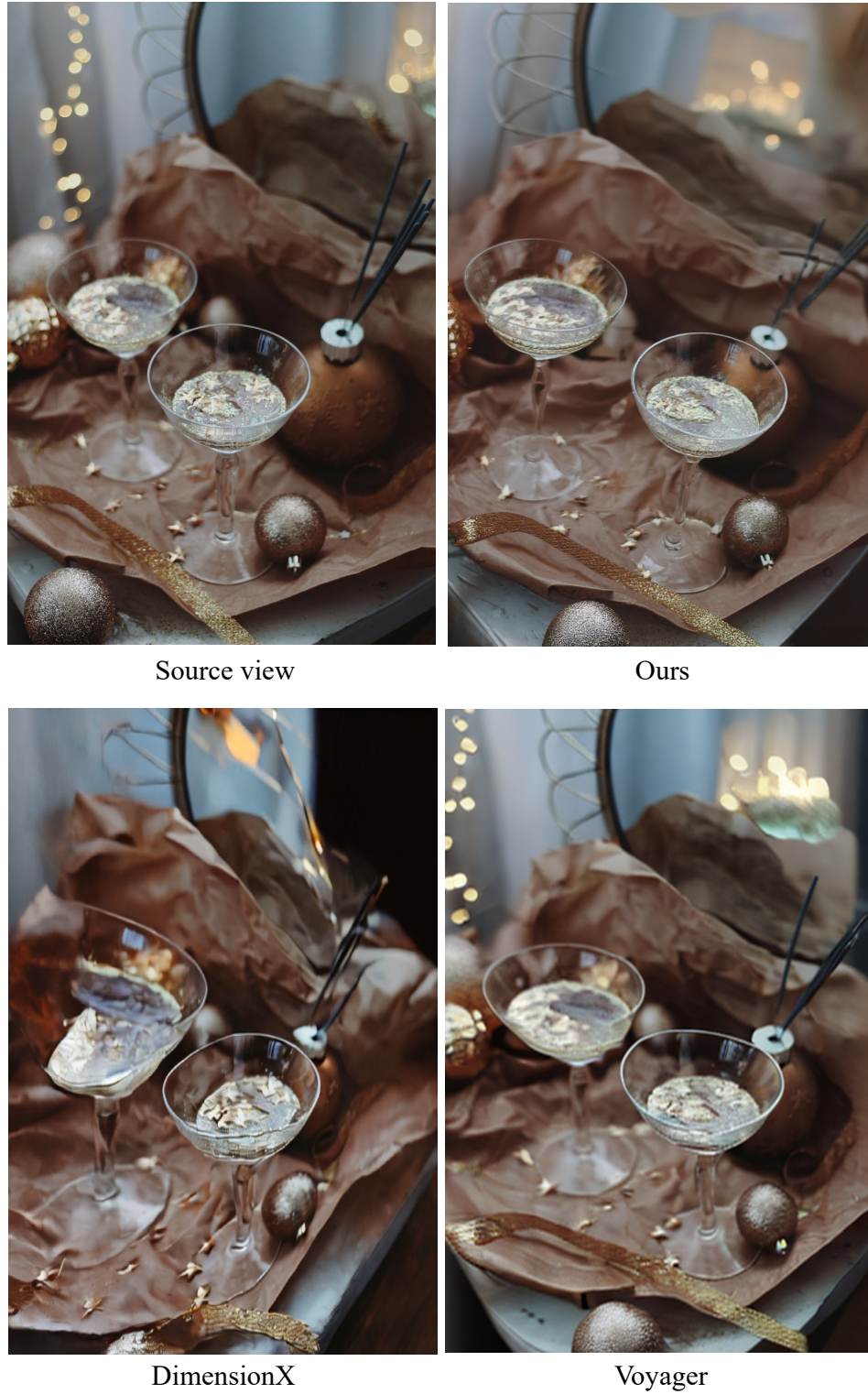


Figure 19: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the  $30^\circ$  leftward rotation, DimensionX and Voyager both alter the shape of the goblet.



Figure 20: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the  $30^\circ$  leftward rotation, SEVA produces completely distorted results, FlexWorld introduces object distortions and alters the overall image style.





Source view

Ours



NVS-Solver

GenWarp

Figure 21: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° leftward rotation, NVS-Solver shows little change but introduces some distortions, GenWarp produces blurred results.





Figure 22: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° leftward rotation, See3D distorts the scene, and MVGenMaster adds noise to the results.



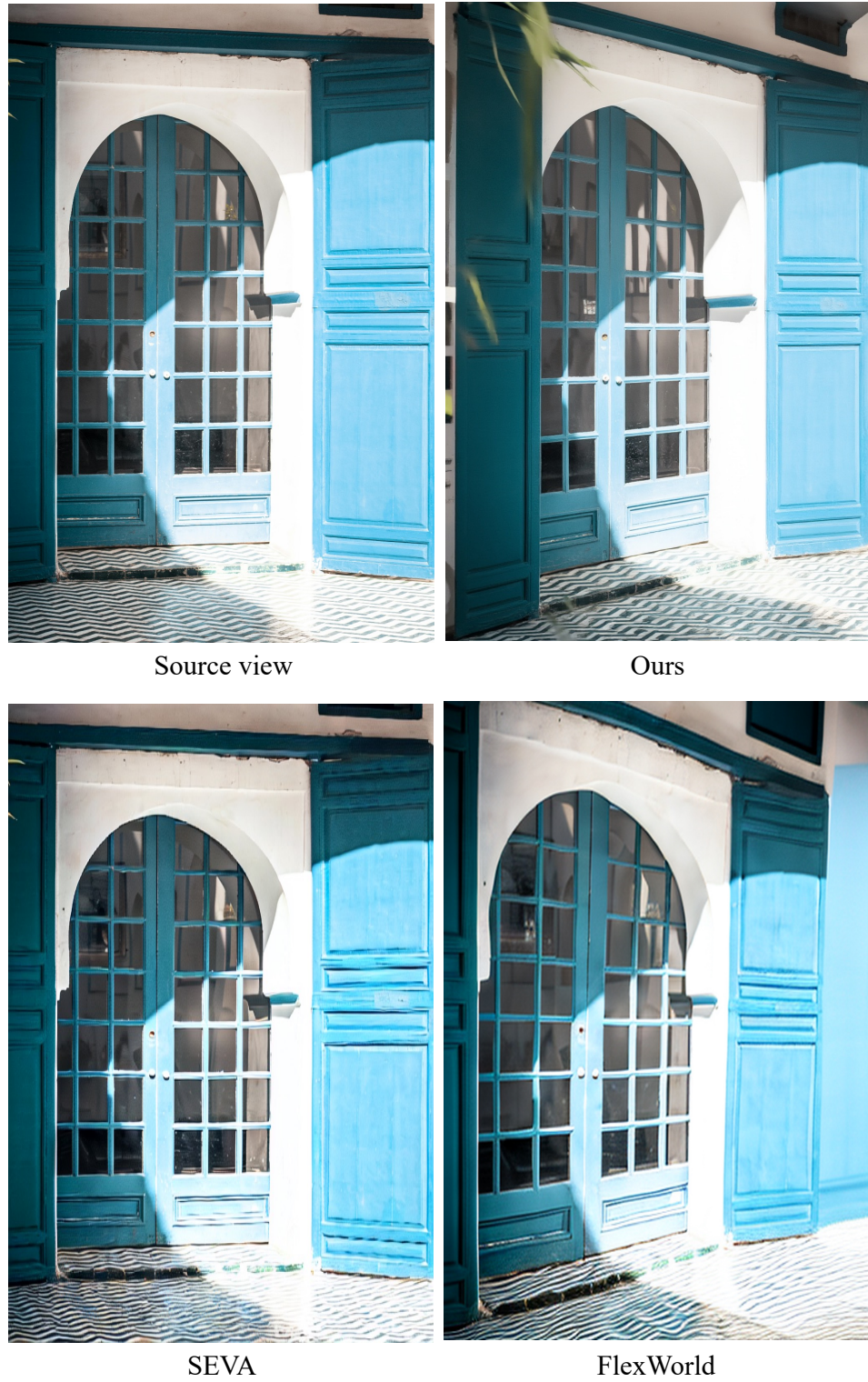


Figure 23: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° leftward rotation, SEVA shows little change, FlexWorld affects the floor patterns.





Figure 24: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° leftward rotation, DimensionX and Voyager alter both the object shapes and the overall image style.



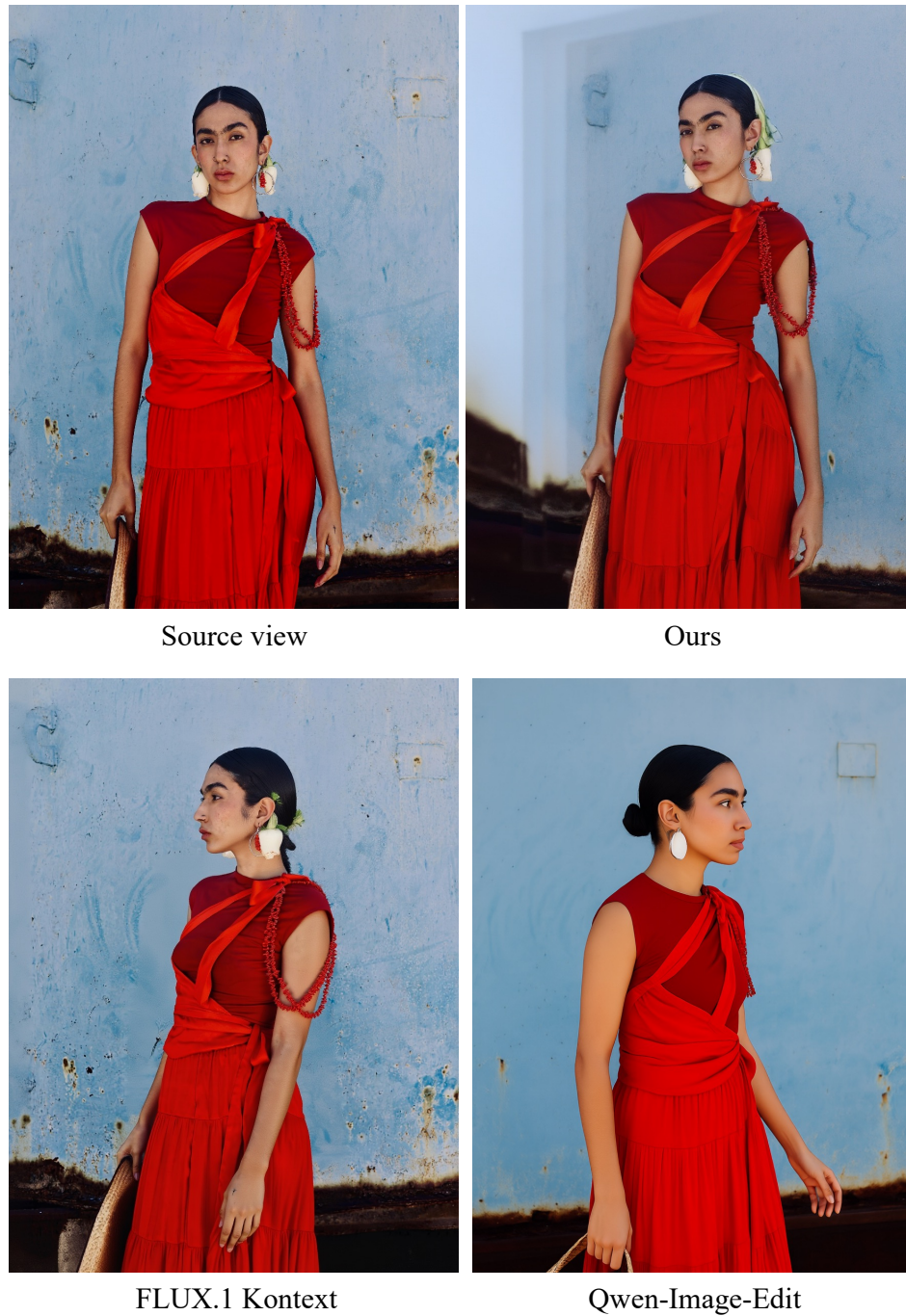


Figure 25: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, FLUX only rotates the person without rotating the background, Qwen rotates in the opposite direction and also changes the person’s pose.



Figure 26: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, FLUX shows only minor changes without rotating the background, Qwen alters the person’s pose and expression without rotating the background.



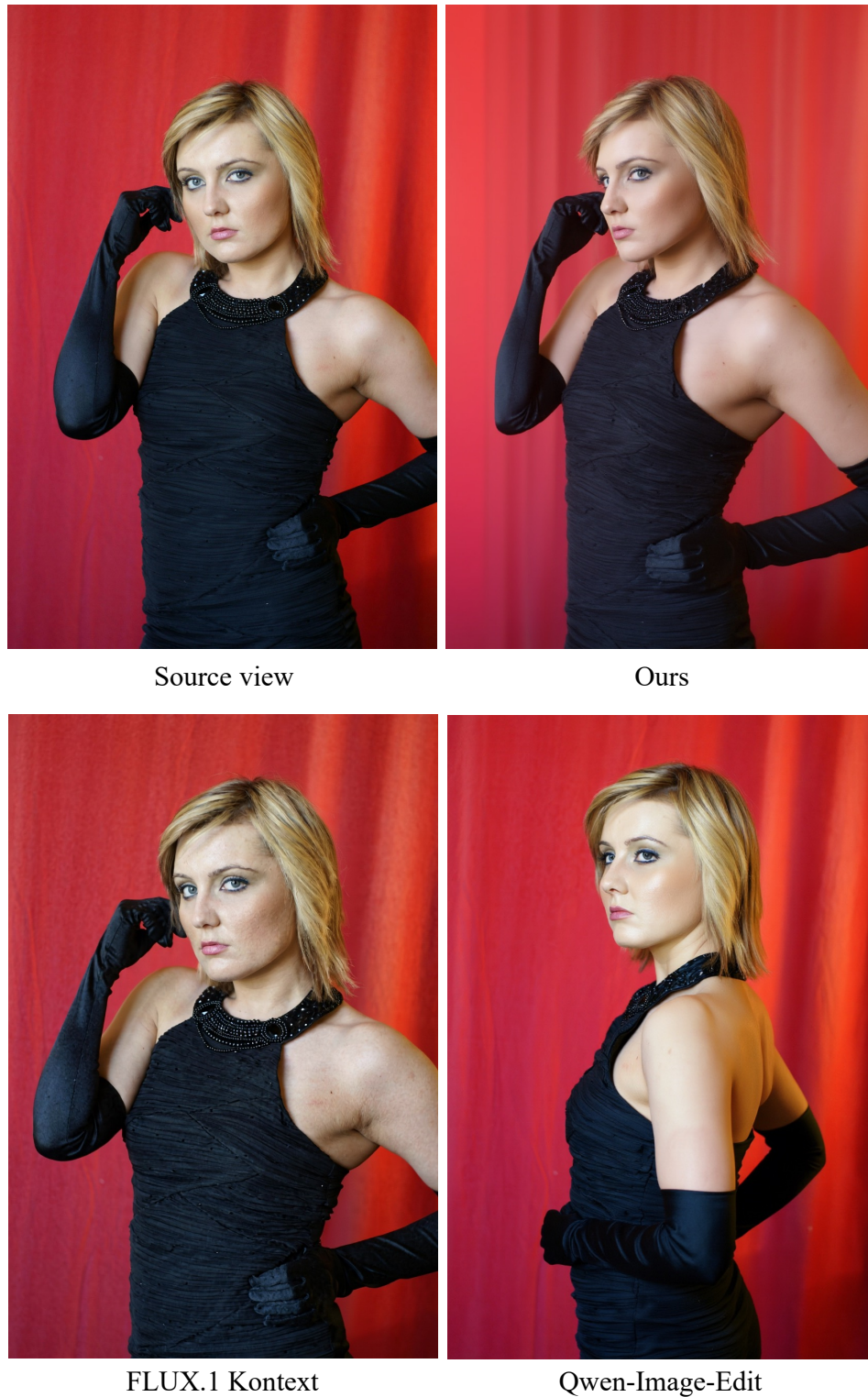


Figure 27: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, FLUX shows only minor changes, Qwen changes the person’s pose without rotating the background.



Figure 28: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, FLUX only rotates the person’s head, Qwen changes the person’s pose.





Figure 29: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, FLUX shows only minor changes, Qwen changes the person’s pose.



Source view

Ours



FLUX.1 Kontext

Qwen-Image-Edit

Figure 30: Supplementary novel view synthesis (NVS) examples on in-the-wild images. For the 30° rightward rotation, FLUX shows only minor changes, Qwen changes the person’s pose.



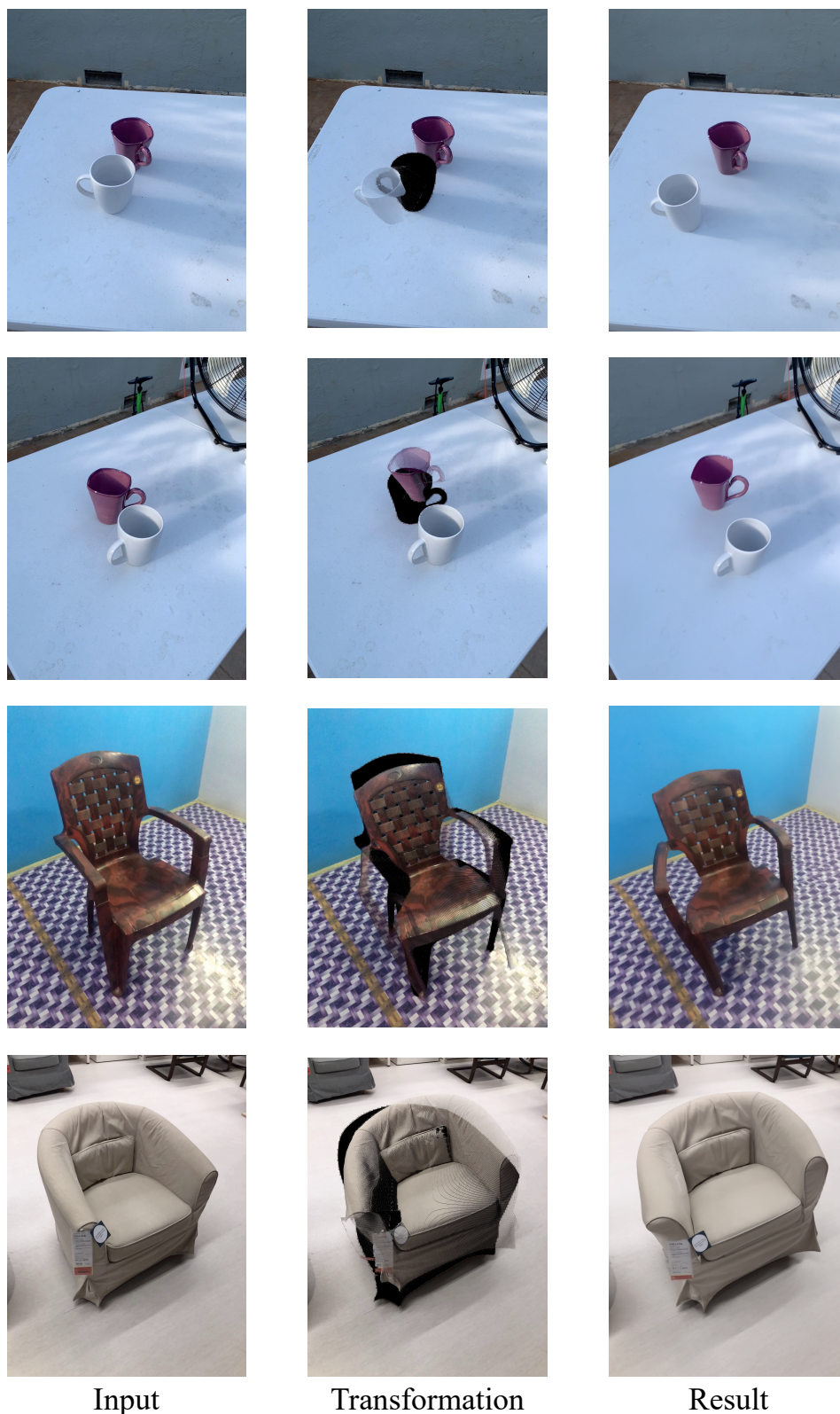


Figure 31: Supplementary 3D-aware object editing examples on Objectron dataset.



Input

Transformation

Result

Figure 32: Supplementary 3D-aware object editing examples on Objectron dataset.



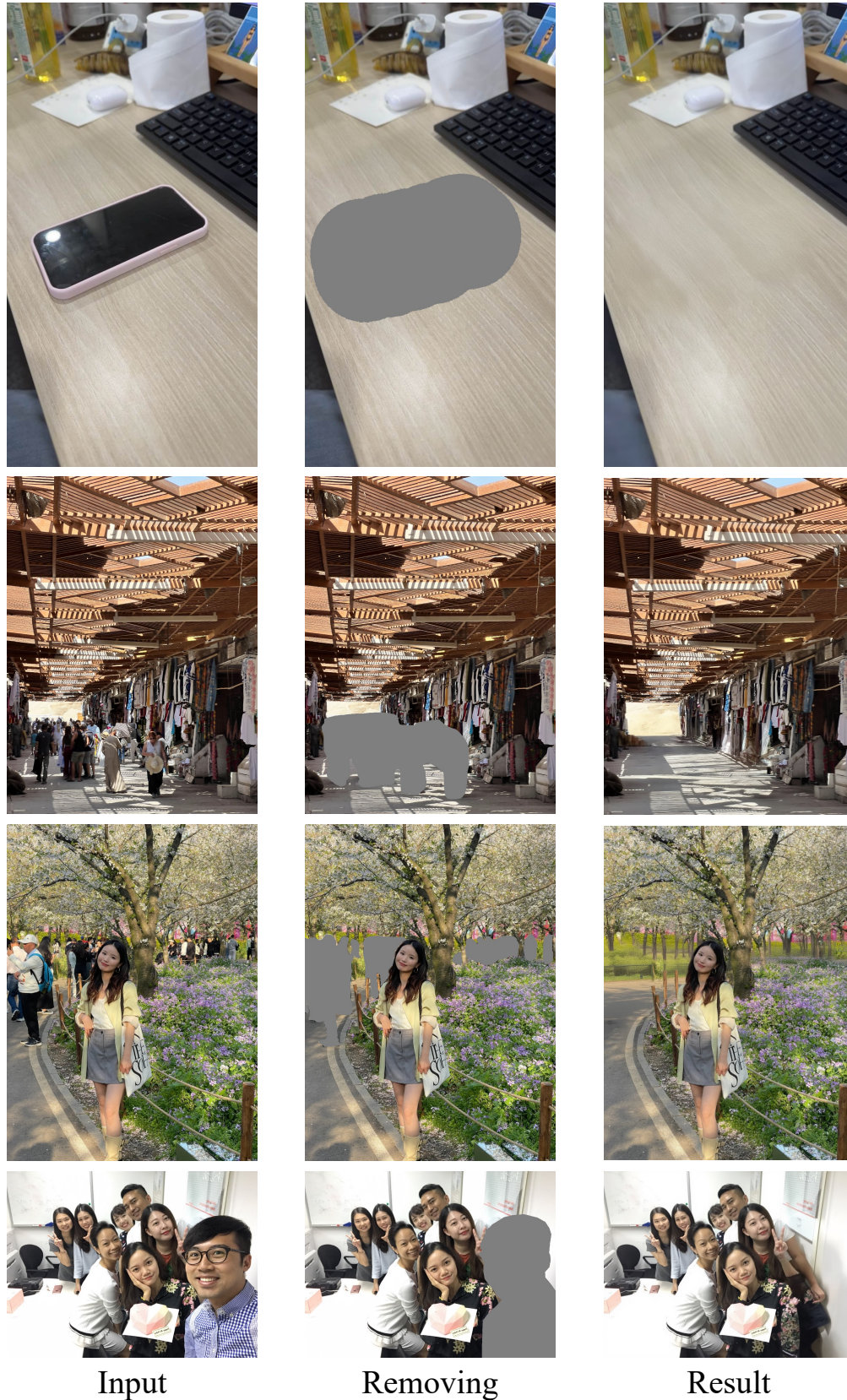


Figure 33: Supplementary object removing examples on in-the-wild images.

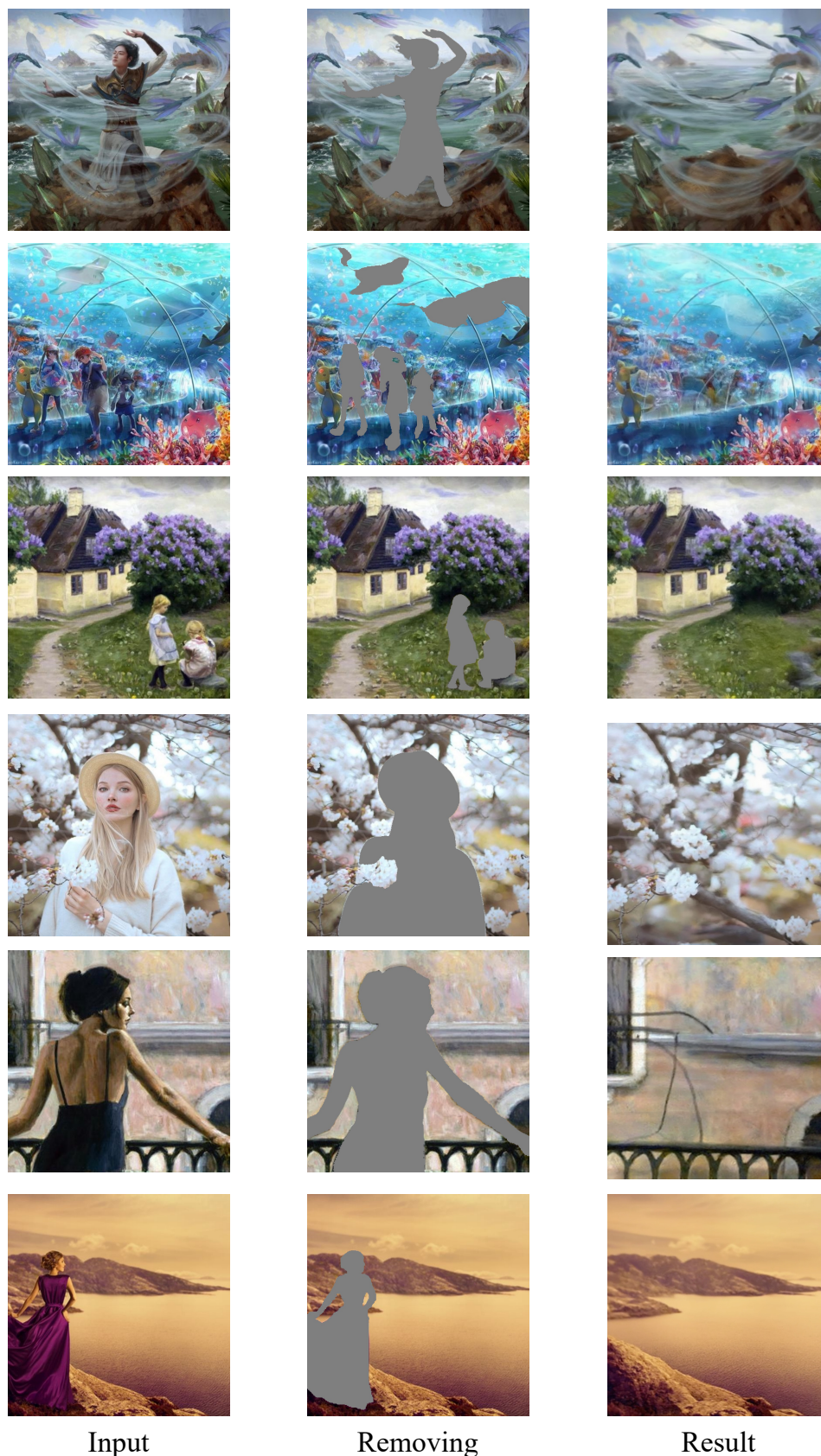


Figure 34: Supplementary object removing examples on in-the-wild images.