| Reference image | Reference mask | Composite image | Composite mask | BG | RO | Ours |

Figure 5: From left to right, we show the reference image, the mask of reference object, the composite image, the mask of composite object, and the harmonized results obtained using different style vectors. "BG" uses background style vector, "RO" uses reference object style vector, and "Ours" uses our hallucinated style vector.

4.4 More Results in Supplementary

In the supplementary, we will provide ablation study results, more visual comparison with baselines, and discussion on failure cases. We will also show the results beyond COCO (**?**) dataset to demonstrate the generalization ability of our method across different datasets and different object categories.

5 Conclusion

In this work, we have explored learning from painterly objects for painterly image harmonization. Based on the annotated pairs of composite images and reference painterly images, we have succeeded in hallucinating the target style of composite object, leading to visually pleasing harmonization results. Extensive experiments on the benchmark dataset have proved the advantage of our proposed ArtoPIH.

Acknowledgments

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