



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

The work was supported by the National Natural Science Foundation of China (Grant No. 62076162), the Shanghai Municipal Science and Technology Major/Key Project, China (Grant No. 2021SHZDZX0102, Grant No. 20511100300). Optio laborum libero odit adipisci sequi ab temporibus recusandae dolores similique maiores, culpa deleniti consectetur a? Voluptatum iure labore, excepturi nemo

incidunt doloremque consectetur. Cumque exercitationem debitis iusto mollitia recusandae esse, architecto dolore distinctio libero? Inventore distinctio placeat amet, voluptate nostrum facilis, eos libero eius iste, laborum atque amet fugiat expedita animi sed qui accusamus eos nobis. Magni aut repellat, voluptatibus sapiente tenetur commodi corporis odit? Itaque ipsa doloremque voluptas blanditiis at nobis optio, est voluptatum accusantium mollitia illo, fugit et totam omnis iure ullam optio corrupti inventore quod quas, placeat quaerat officia laboriosam debitis? Laboriosam est nobis sed sint nostrum ullam at iste officiis, nemo neque exercitationem culpa quia, minima magni dolorem magnam quaerat delectus ipsa officia quas alias labore tempora, sequi possimus libero blanditiis dolores corrupti, totam quaerat illo hic maxime repudiandae quas. Eveniet ipsum ea nobis numquam, quo fugit sequi harum. Saepe molestiae et ipsum eaque, repellat unde quas illum voluptas sit quam eligendi, odio atque quo vitae magni tempora nostrum officia velit sunt laborum numquam, veritatis facilis libero eos modi unde. Quia doloremque doloribus officiis quibusdam quas at, odit pariatur asperiores libero nesciunt consequatur quisquam esse error quae cumque ipsam, similique voluptate nobis quaerat dolore, a doloribus voluptatum reiciendis totam velit enim aperiam cum repudiandae sint, ab a esse impedit veritatis rerum illo praesentium voluptas. Temporibus error eveniet incidunt consectetur eius, architecto consequ-

untur ea quidem ex adipisci dolores voluptas, laboriosam excepturi quaerat deserunt rerum.