Single Image Reflection Removal through Cascaded Refinement (*Supplementary Material*)

This supplementary material provides more details and results that were not included in the main text due to the space limitation. The contents are organized as follows.

- Figure 1 illustates more cascading results. Images in odd rows show the cascading results of $\boldsymbol{G_T}$, and images in even rows demonstrate the cascading results of $\boldsymbol{G_R}$.
- Figure 2 and Figure 3 display the complete overview of our newly created dataset `Nature`, except for a few pictures that may compromise anonymity. The former are images captured indoors, and the latter are images captured outdoors.
- More visualization comparisons are demonstrated in Figure 4 and Figure 5. We compare our IBCLN against state-of-the-art methods including Zhang et al. [4], BDN [3], RmNet [2] and ERRNet [1].

References

[1] Kaixuan Wei, Jiaolong Yang, Ying Fu, David Wipf, and Hua Huang. Single image reflection removal exploiting misaligned training data and network enhancements. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, pages 8178–8187, 2019.

[2] Qiang Wen, Yinjie Tan, Jing Qin, Wenxi Liu, Guoqiang Han, and Shengfeng He. Single image reflection removal beyond linearity. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, pages 3771–3779, 2019.

[3] Jie Yang, Dong Gong, Lingqiao Liu, and Qinfeng Shi. Seeing deeply and bidirectionally: A deep learning approach for single image reflection removal. In *Proceedings of the European Conference on Computer Vision (ECCV)*, pages 654–669, 2018.

[4] Xuaner Zhang, Ren Ng, and Qifeng Chen. Single image reflection separation with perceptual losses. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, pages 4786–4794, 2018.

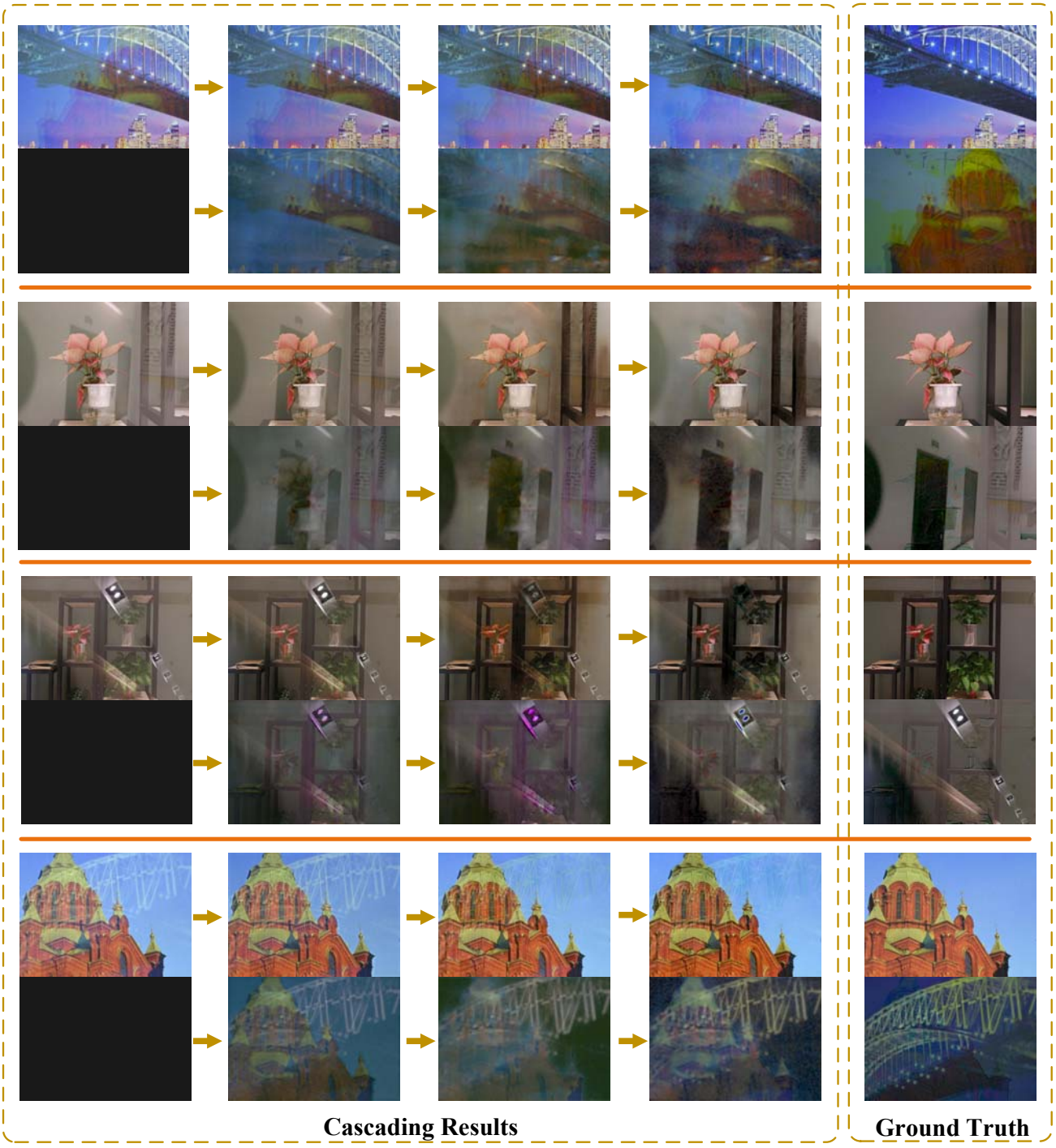


Figure 1. Visualization of results at different cascading steps of the two sub-networks in the proposed model. The estimates of transmissions and residual reflections become increasingly more accurate as they progress through the cascade.

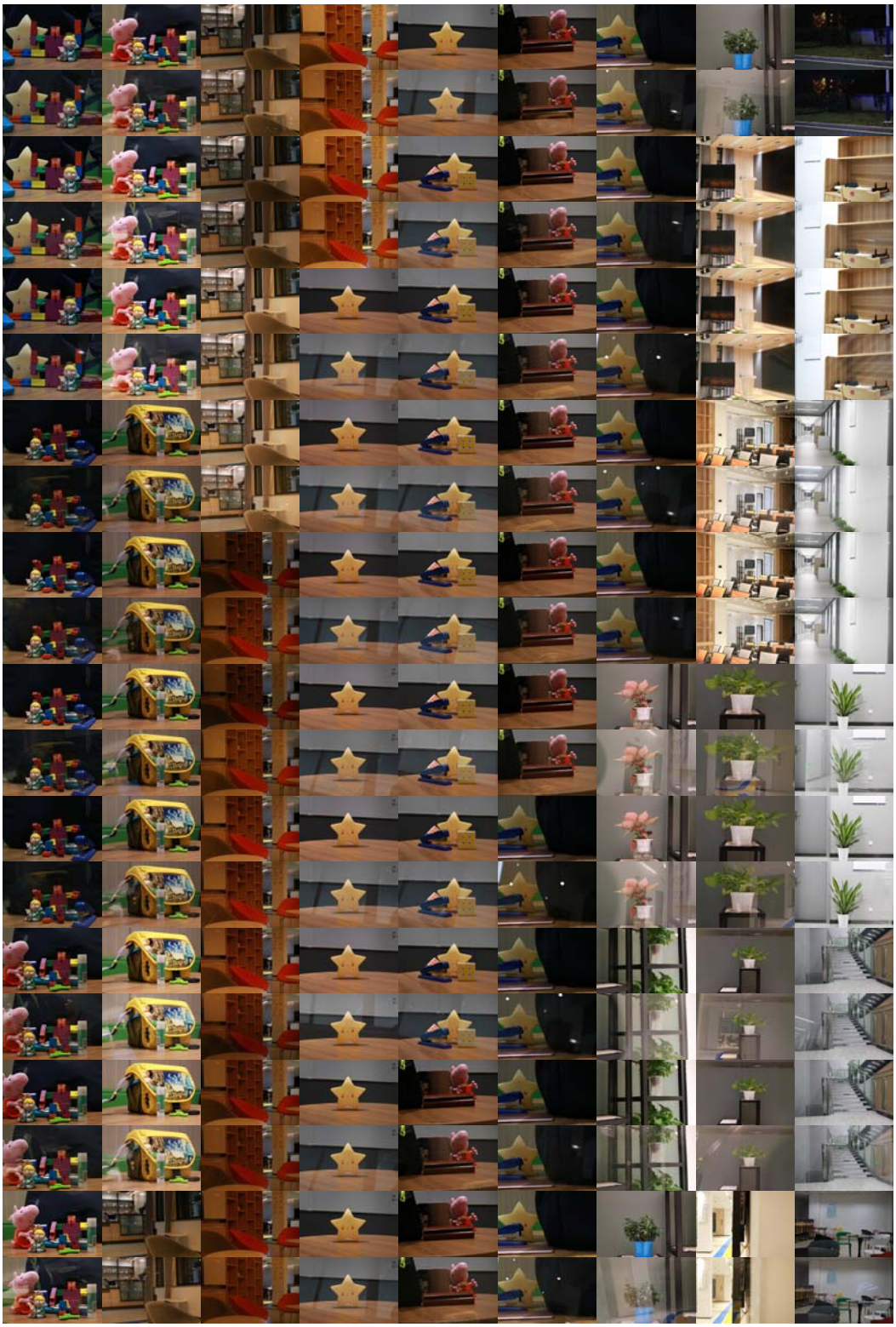


Figure 2. Samples from our real world dataset *Nature* that are captured indoors.

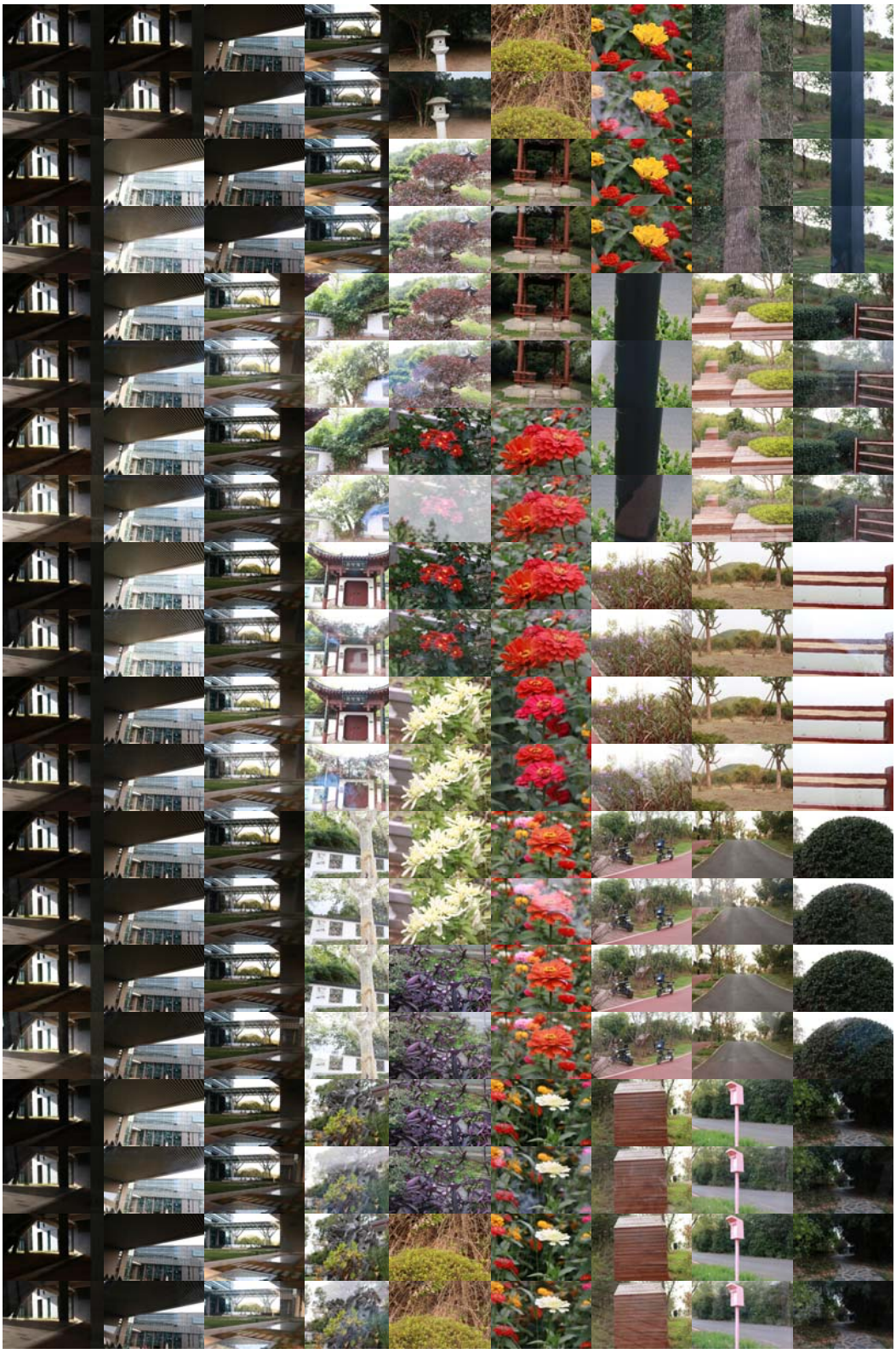
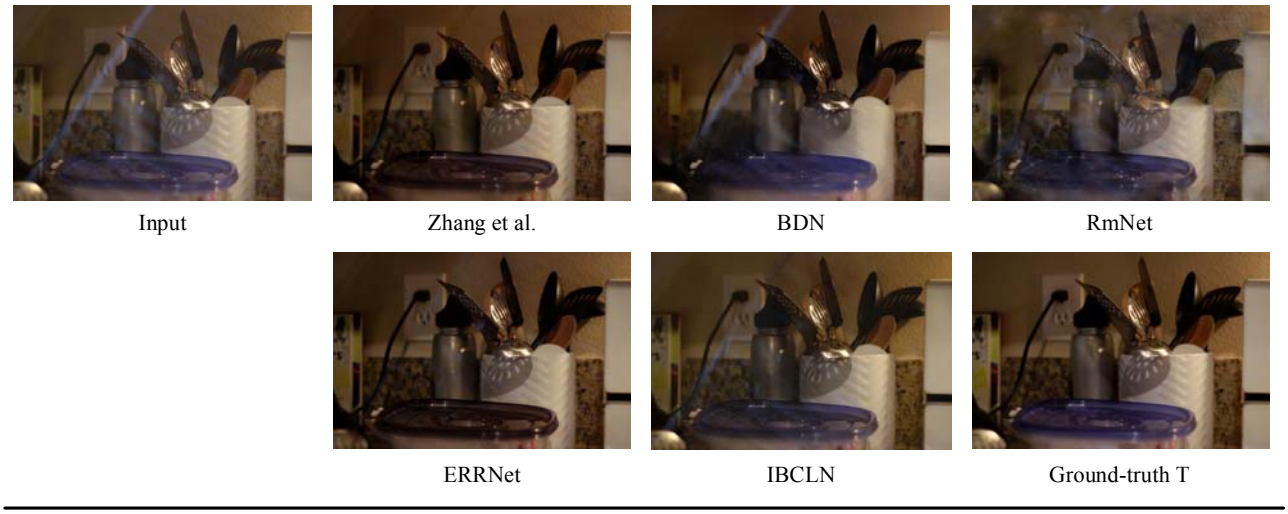
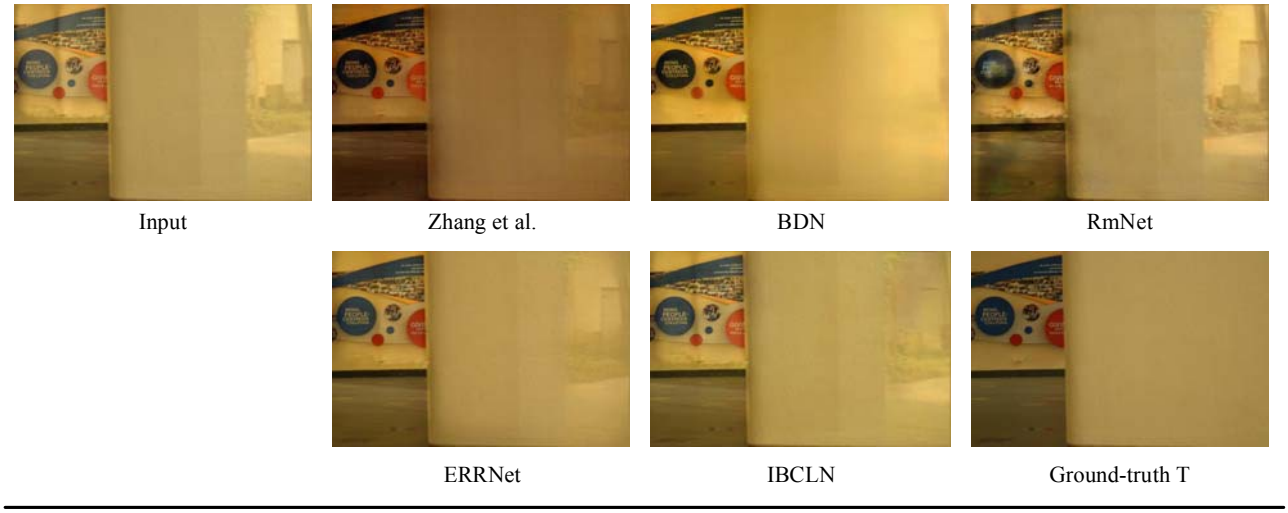


Figure 3. Samples from our real world dataset *Nature* that are captured outdoors.





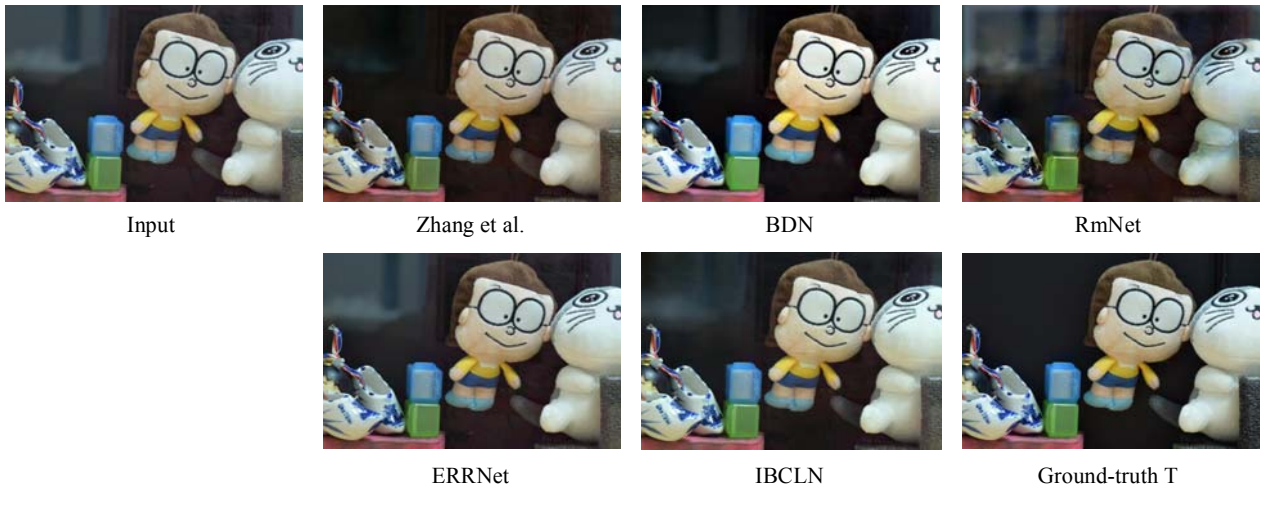


Figure 4. Visual comparison among state-of-the-art approaches and our IBCLN method on more real-world images.

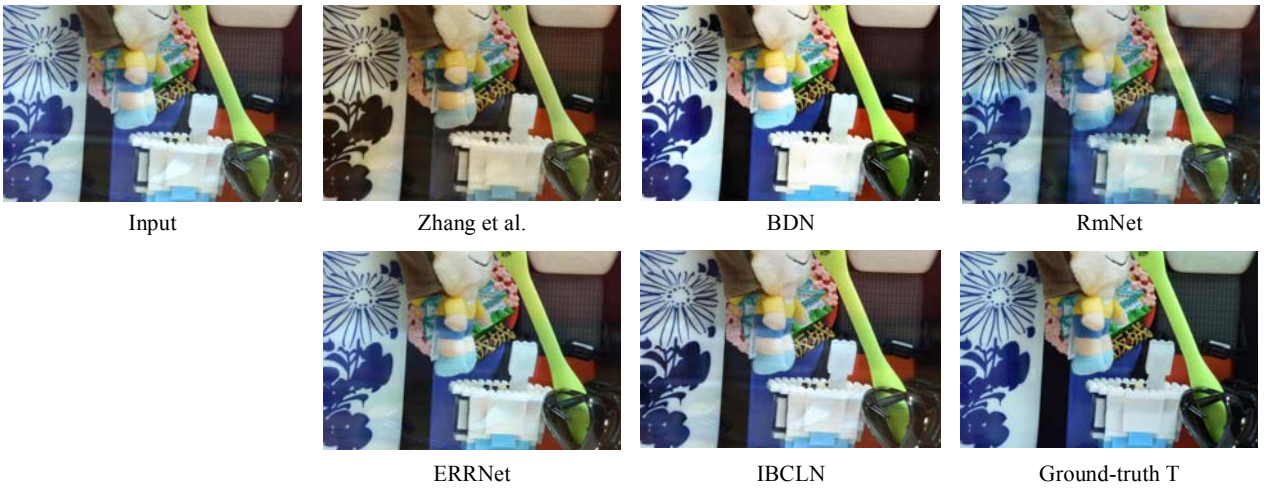


Figure 5. Visual comparison among state-of-the-art approaches and our IBCLN method on more real-world images.