Fig. 1 From left to right: original color image; decolorize; Neumann08; ours, $\lambda = 0.4$.

Fig. 2 From left to right: original color image; decolorize; Rasche05; ours, $\lambda = 0.4$.
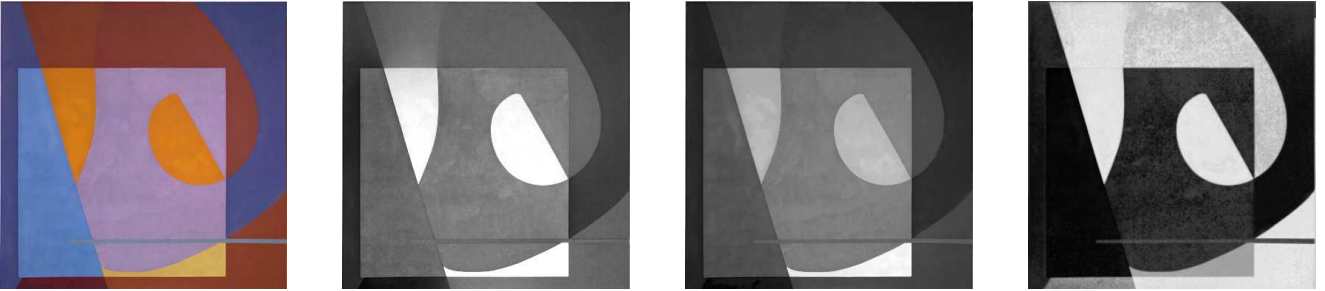

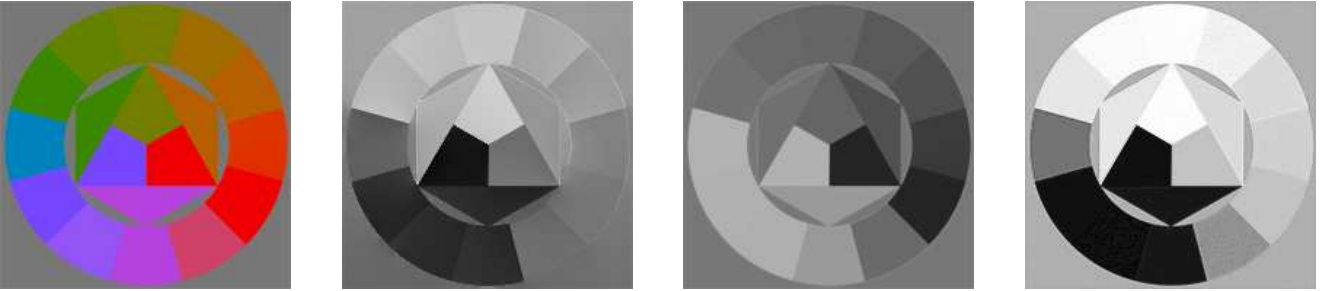**Fig. 3** From left to right: original color image; Neumann08; Rasche05; ours, $\lambda = 0.4$.

Fig. 4 From left to right: original color image; Neumann08; decolorize; ours, $\lambda = 0.4$.
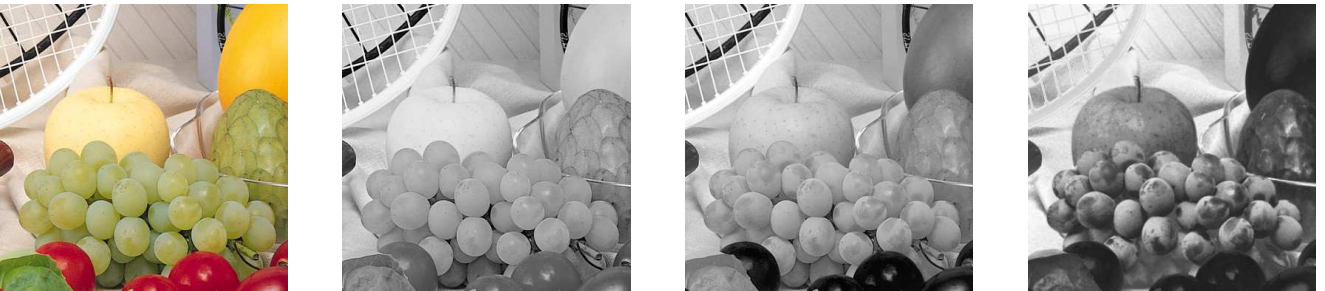

Fig. 5 From left to right: original color image; Smith08; decolorize; ours, $\lambda = 0.4$.

Fig. 6 From left to right: original color image; Smith08; decolorize; ours, $\lambda = 0.4$.

Fig. 7 From left to right: original color image; Smith08; rasche05; ours, $\lambda = 0.4$.
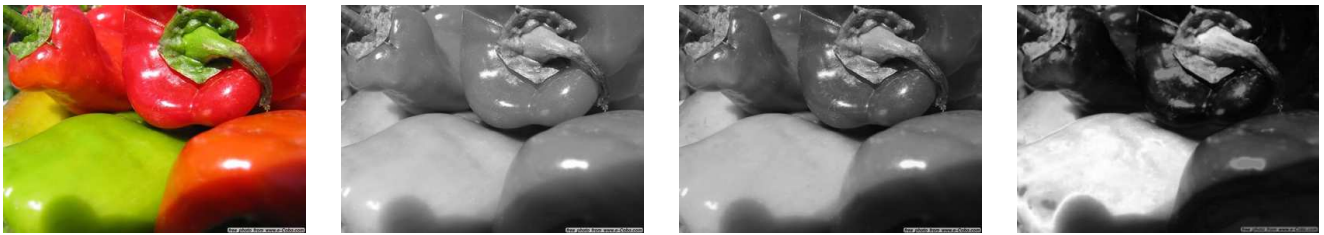

Fig. 8 From left to right: original color image; ciey; color2gray; ours, $\lambda = 0.4$.

Fig. 9 From left to right: original color image; ciey; color2gray; ours, $\lambda = 0.4$.

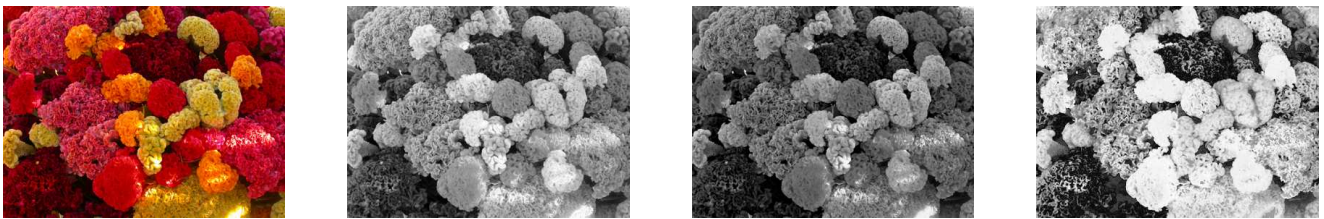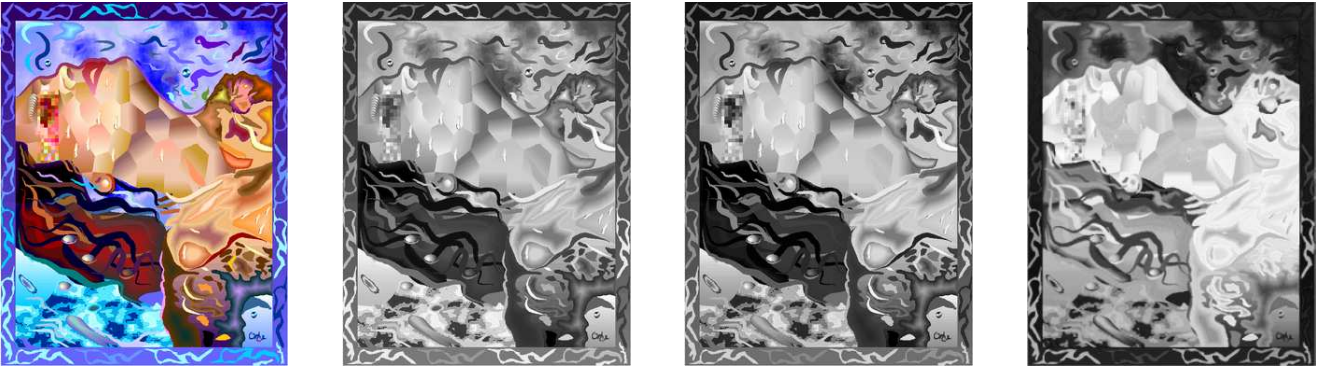**Fig. 10** From left to right: original color image; decolorize; smith08; ours, $\lambda = 0.4$.

Fig. 11 From left to right: original color image; decolorize; Smith08; ours, $\lambda = 0.4$.

Fig. 12 From left to right: original color image; ciey; color2gray; ours, $\lambda = 0.4$.

Fig. 13 From left to right: original color image; ciey; smith08; ours, $\lambda = 0.4$.

Fig. 14 From left to right: original color image; ciey; decolorize; ours, $\lambda = 0.4$.
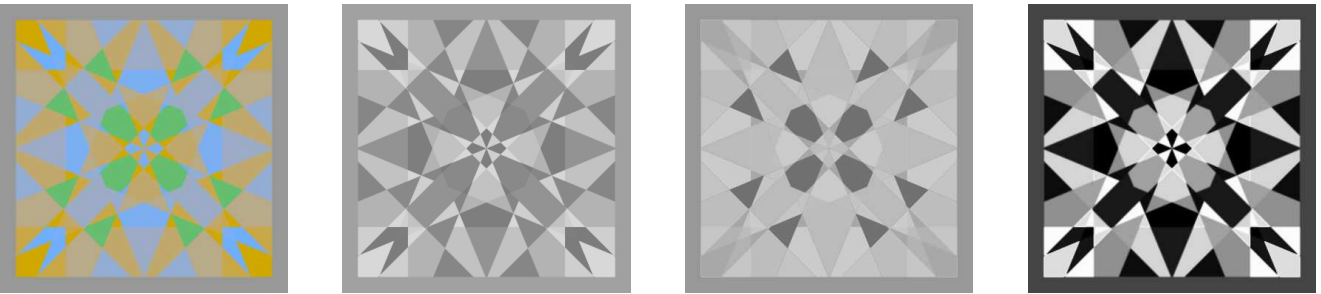

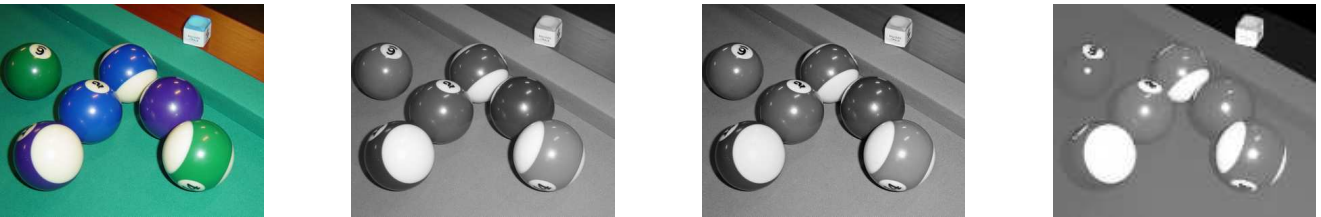**Fig. 15** From left to right: original color image; color2gray; decolorize; ours, $\lambda = 0.4$.

Fig. 16 From left to right: original color image; ciey; smith08; ours, $\lambda = 0.4$.

Fig. 17 From left to right: original color image; decolorize; smith08; ours, $\lambda = 0.4$.

Fig. 18 From left to right: original color image; decolorize; smith08; ours, $\lambda = 0.4$.