

Supplementary document 1

Rendering comparisons between three different parameterizations with CPD methods.

We show the summary plots of SMAPE of all materials and the rendering results.

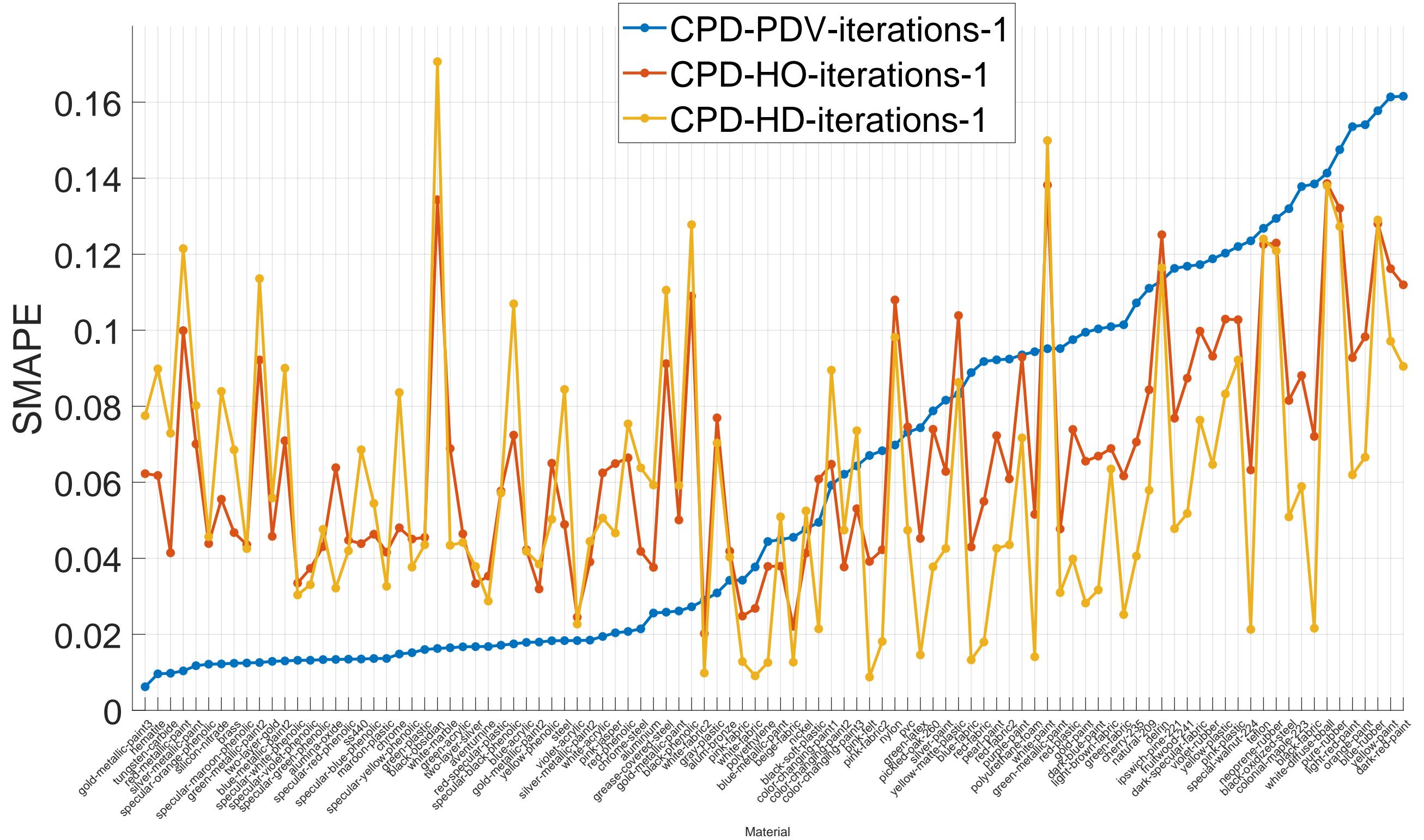
The first plot is SMAPE plots of CPD3D when $L = 1$ on PDV, Half-Out and Half-Diff parameterizations.

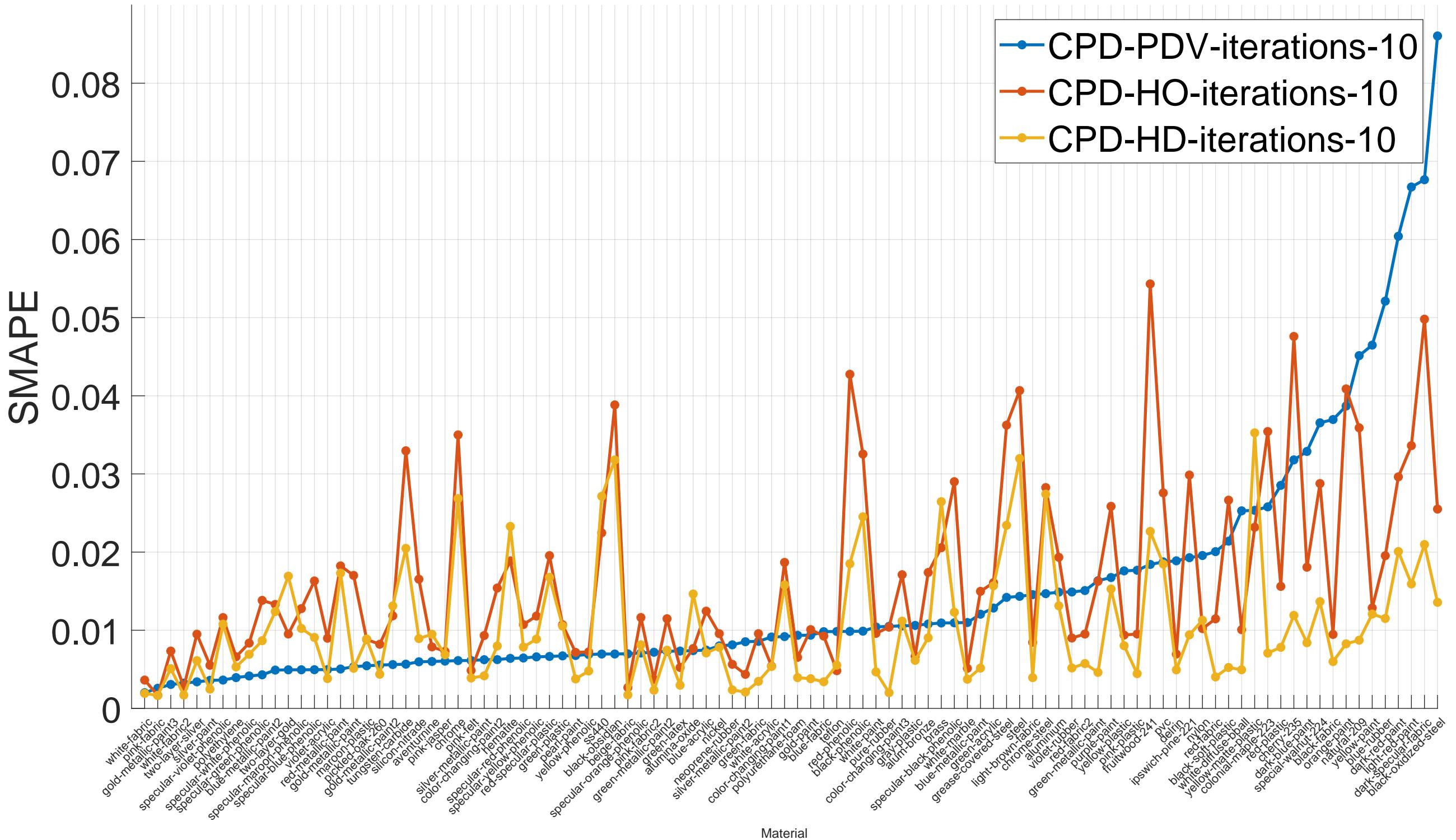
The second plot is SMAPE plots of CPD3D when $L = 10$ on PDV, Half-Out and Half-Diff parameterizations.

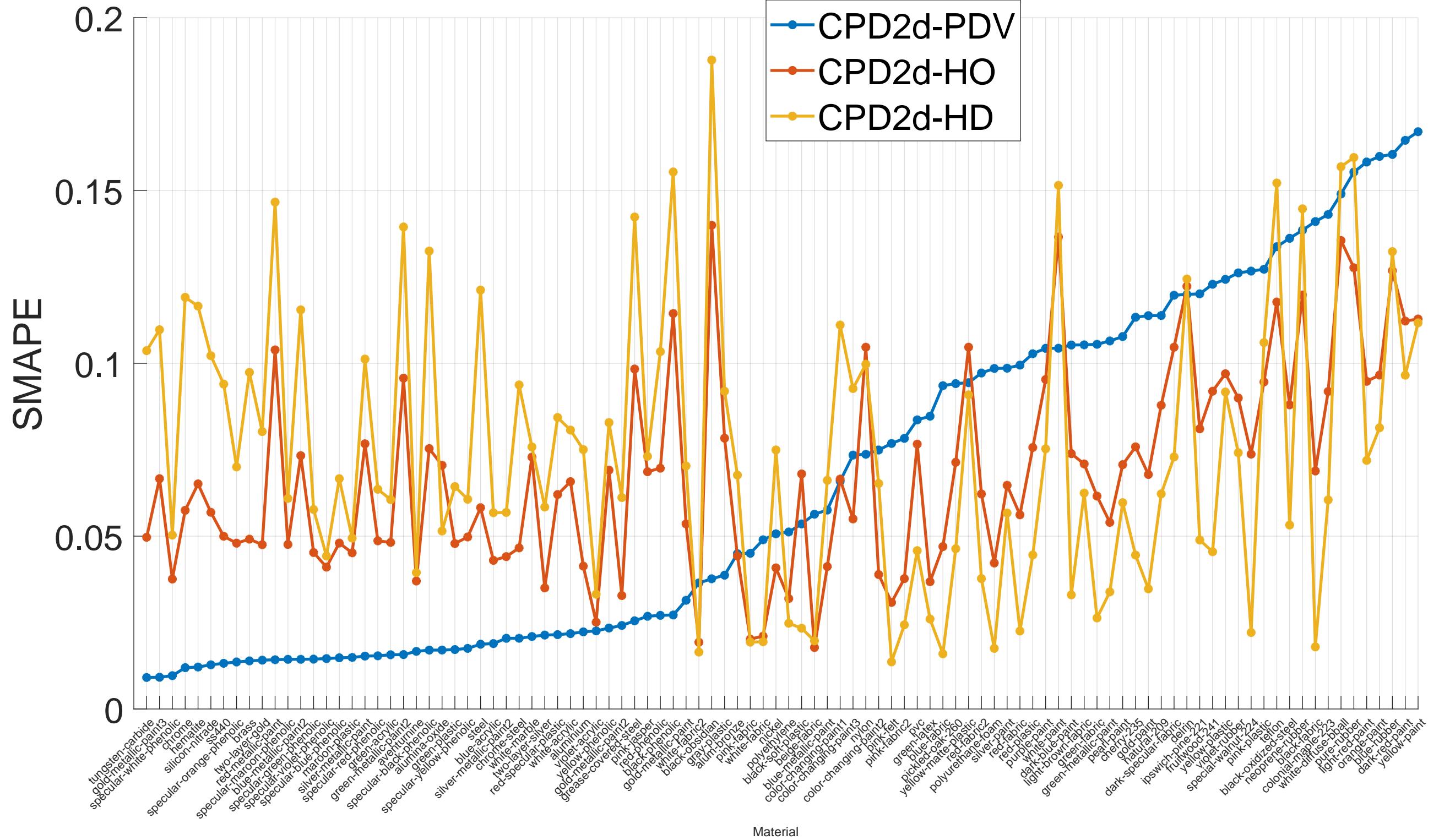
The third plot is SMAPE plots of CPD2D on PDV, Half-Out and Half-Diff parameterizations.

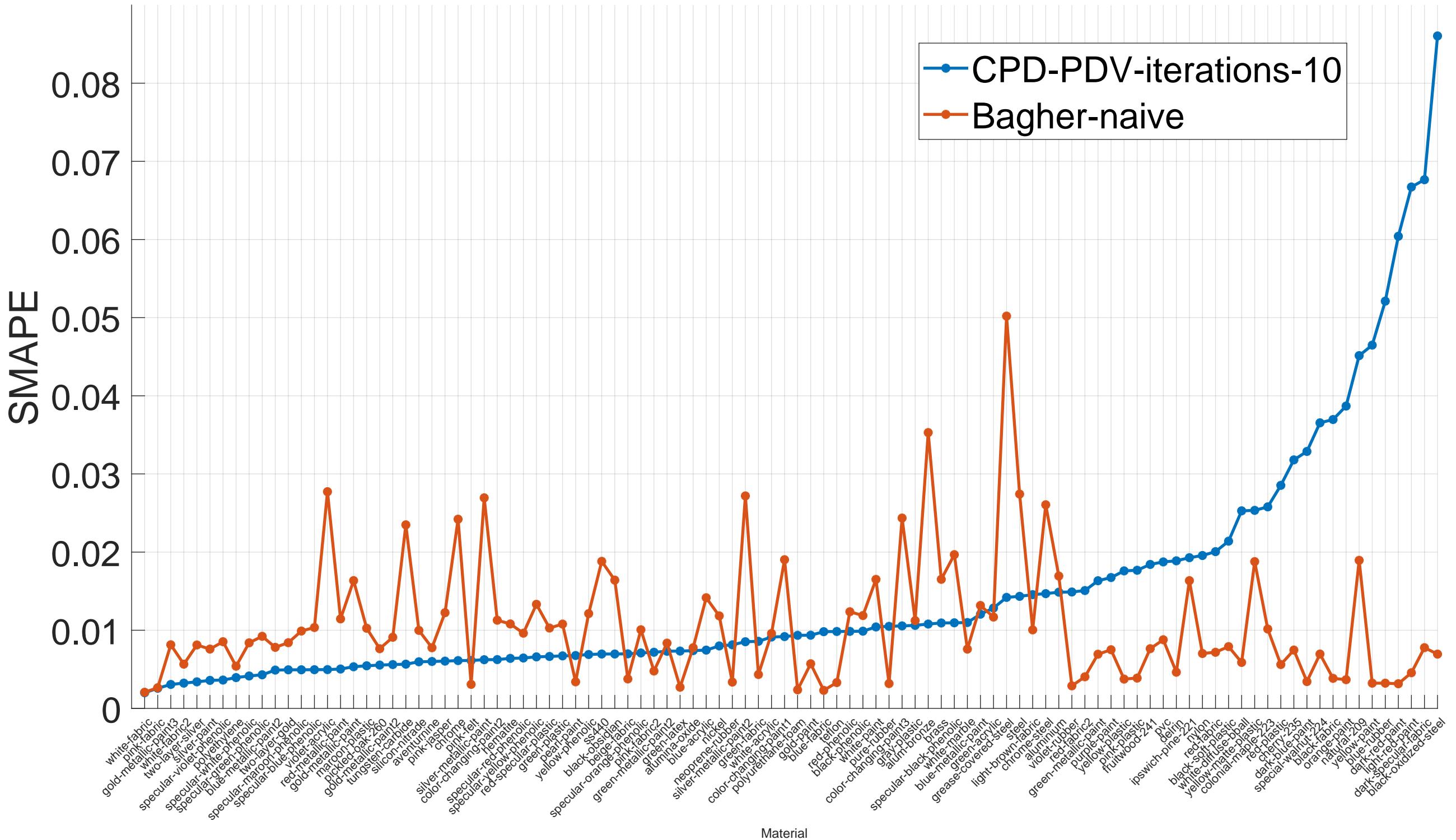
The forth plot is SMAPE plots of CPD3D when $L = 10$ on PDV and Bagher et al's naïve model.

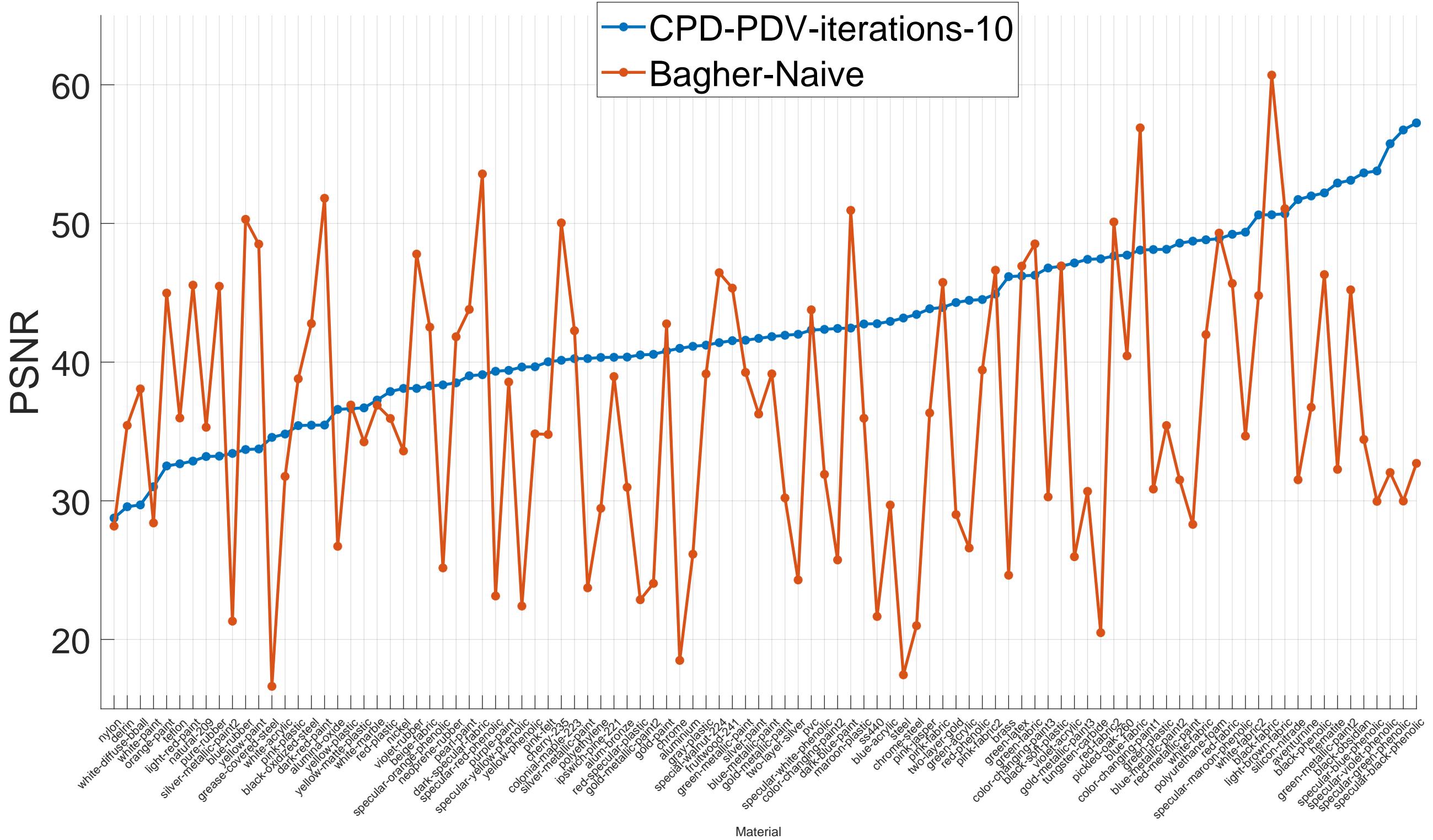
The fifth plot is PSNR plots of CPD3D when $L = 10$ on PDV and Bagher et al's naïve model.

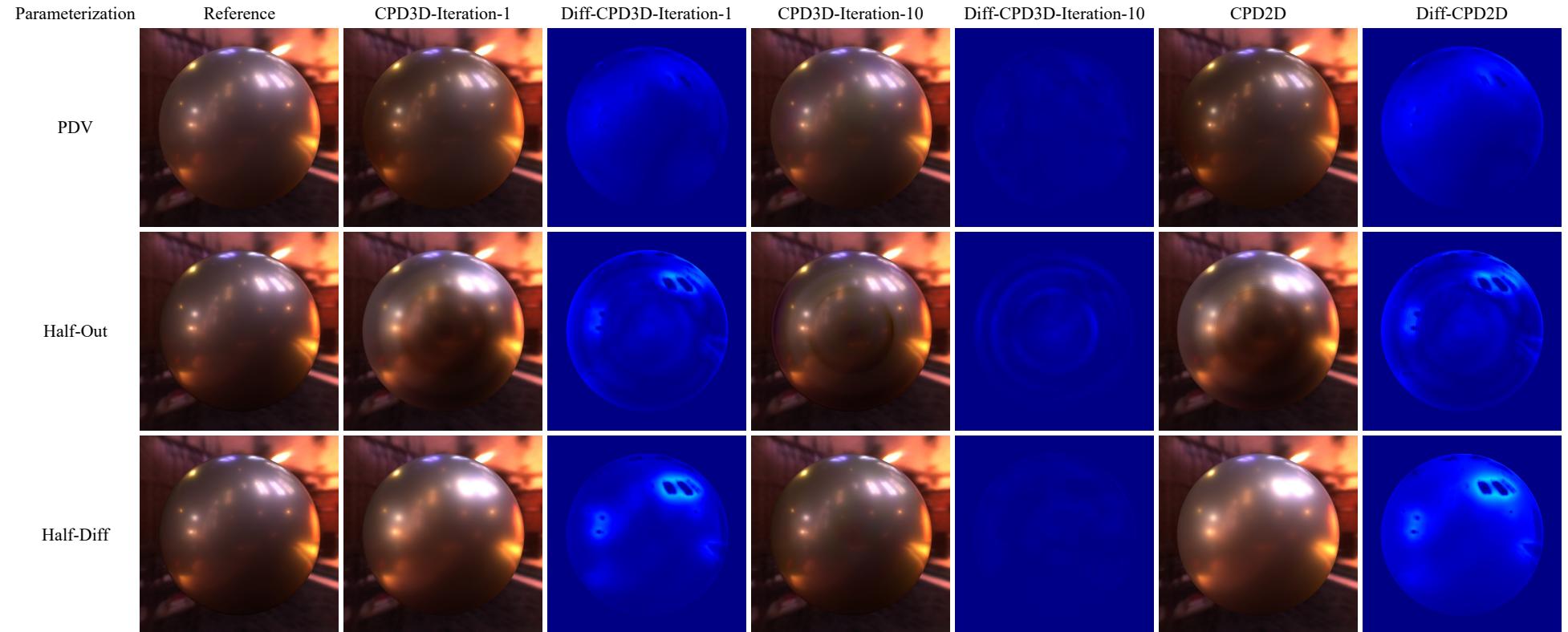




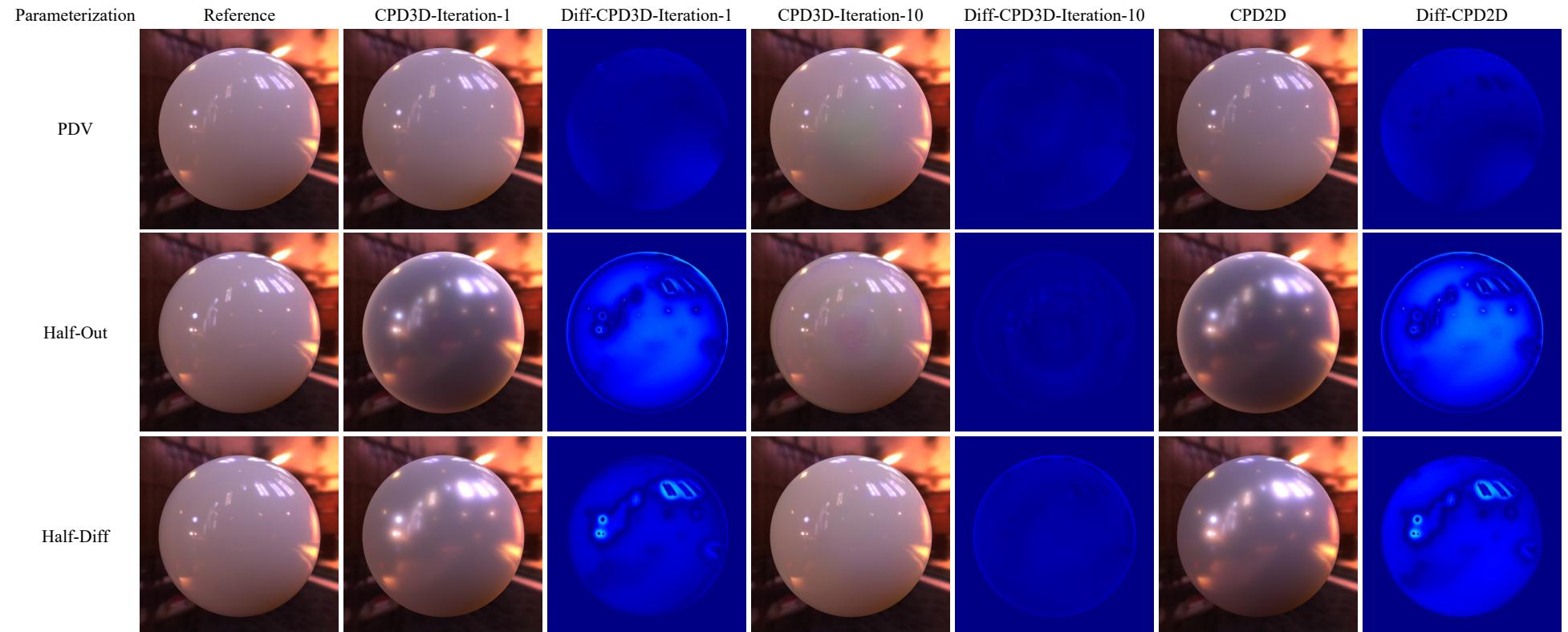




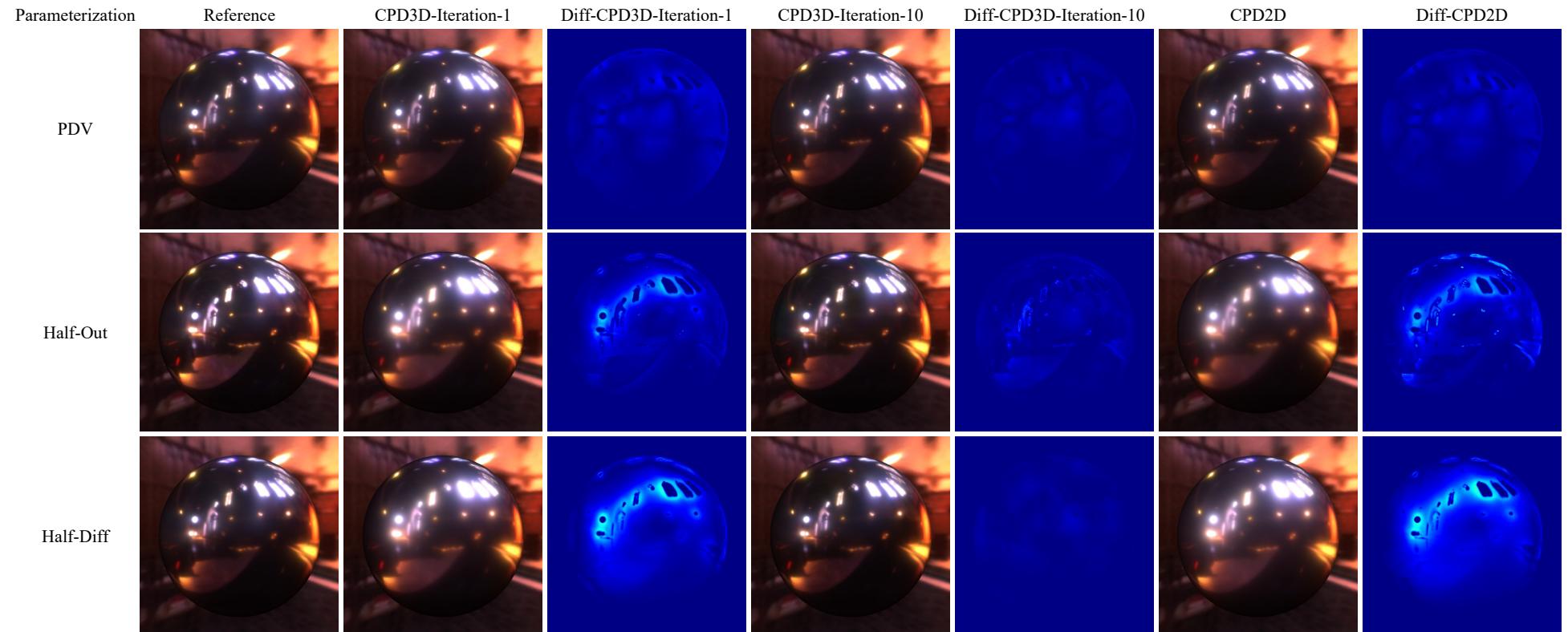


alum-bronze

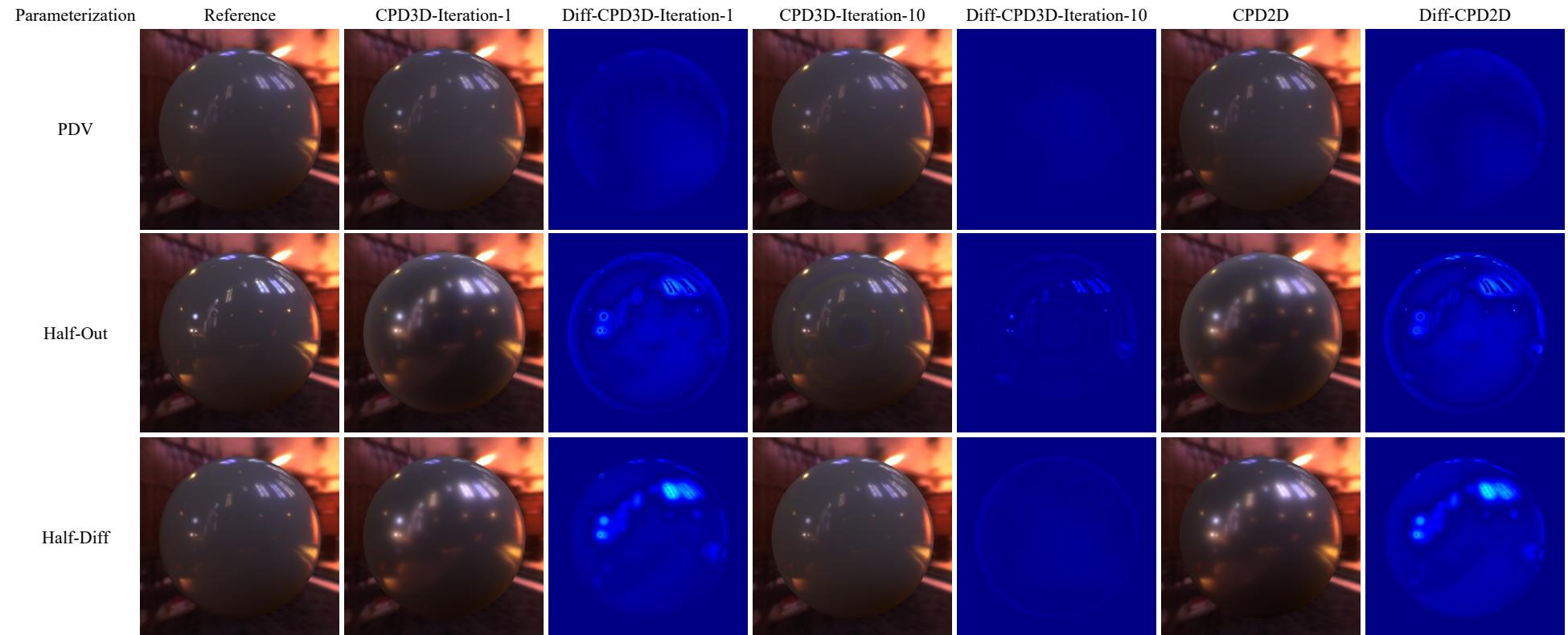
alumina-oxide



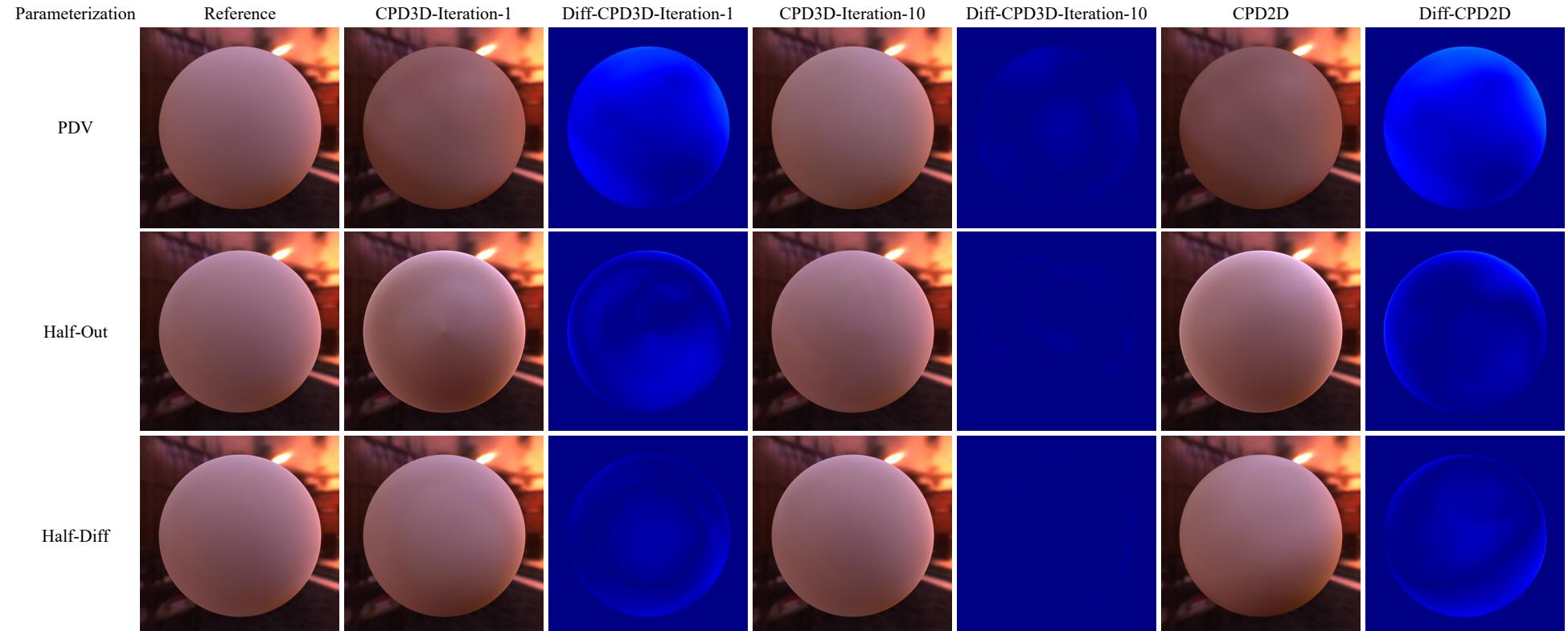
aluminium



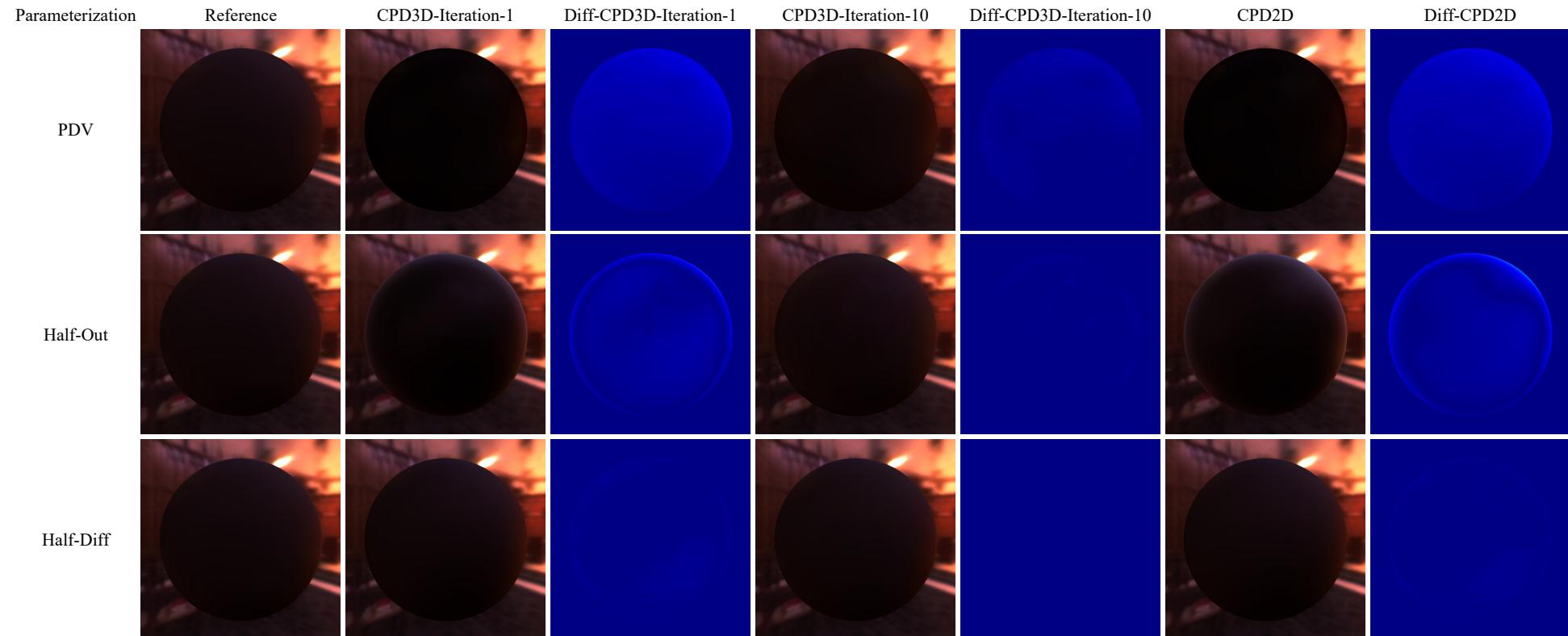
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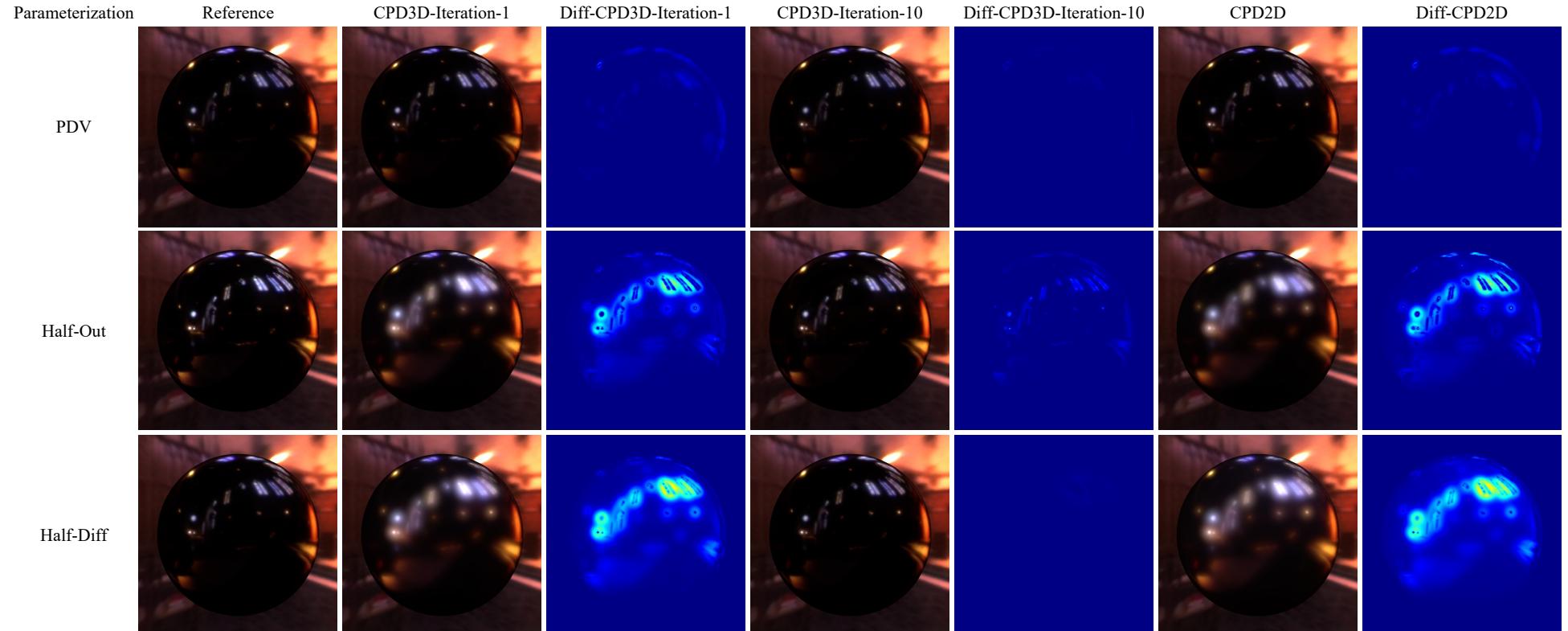
beige-fabric



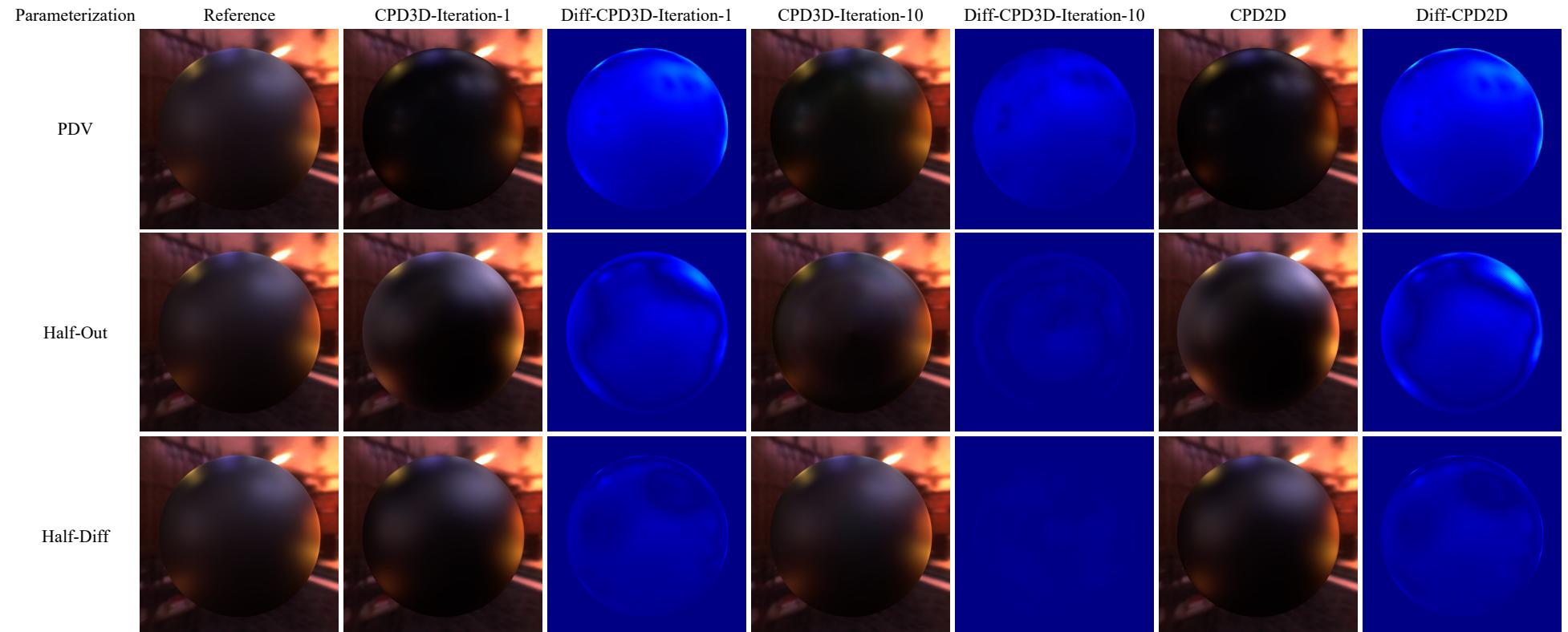
black-fabric



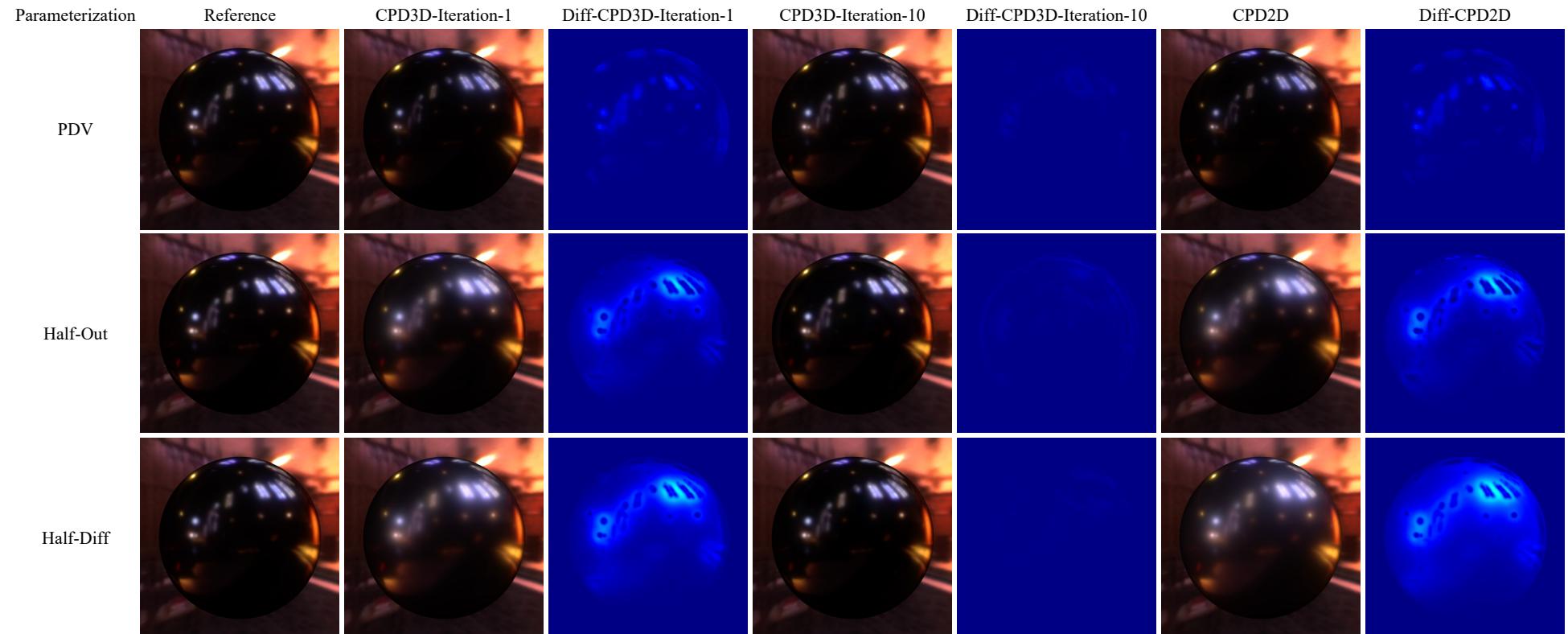
black-obsidian



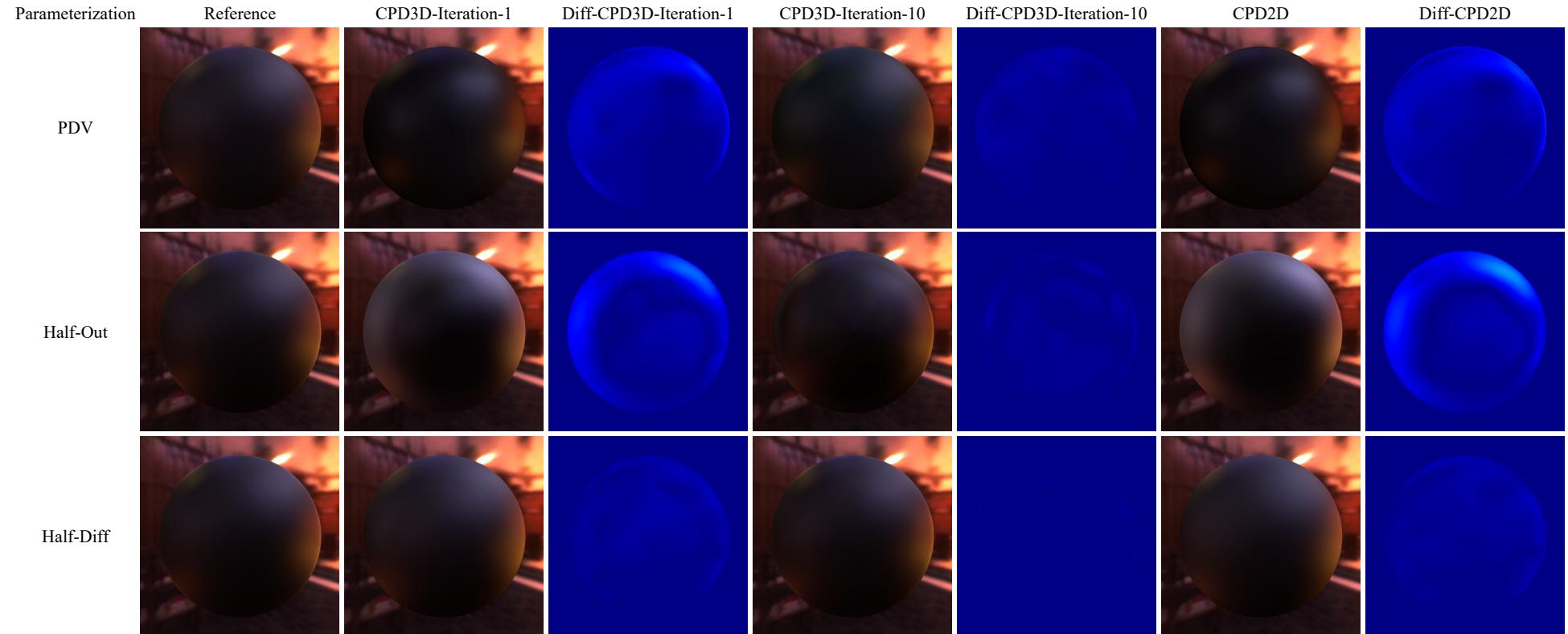
black-oxidized-steel



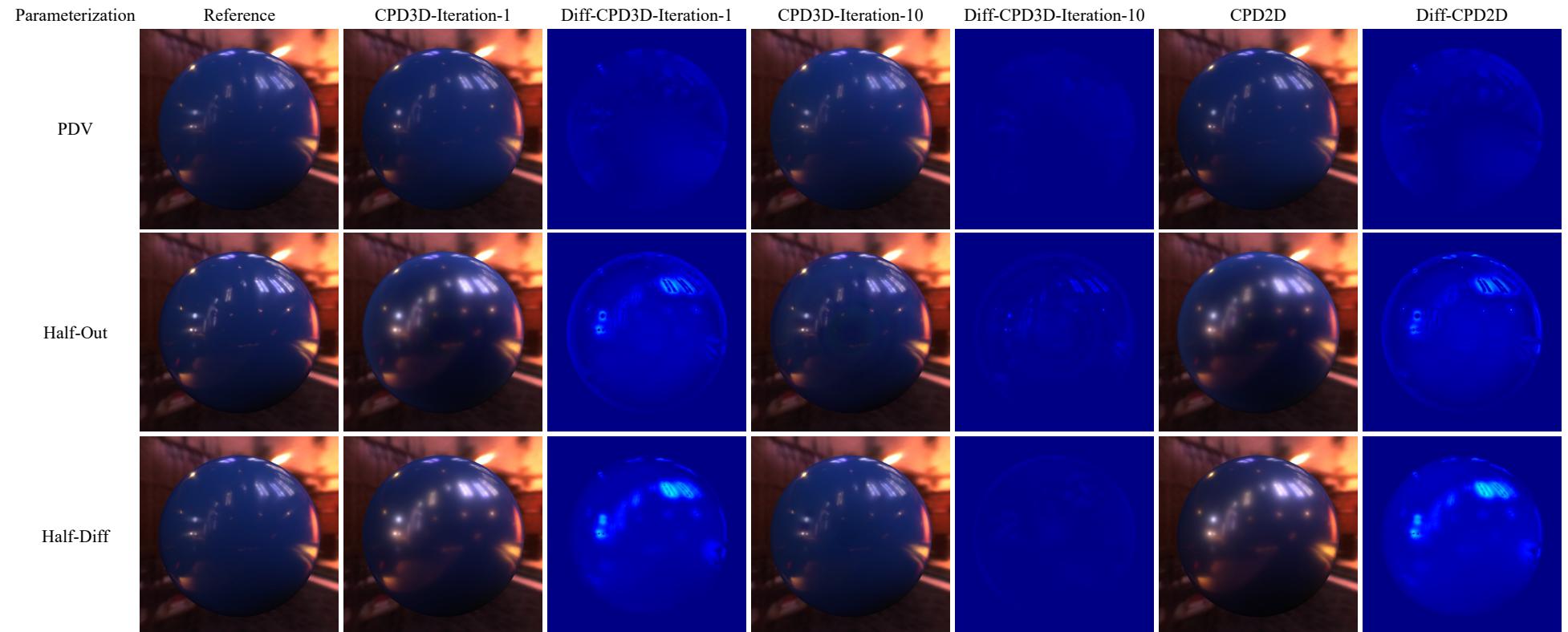
black-phenolic



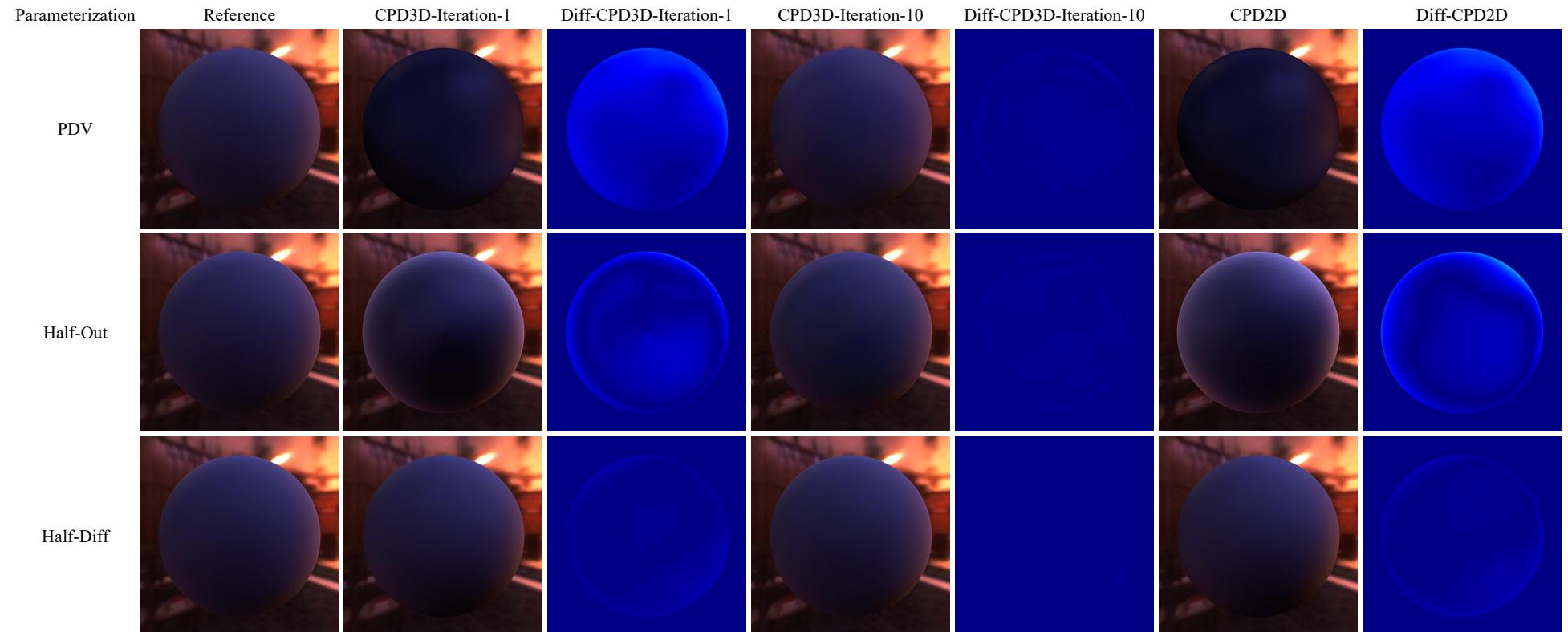
black-soft-plastic



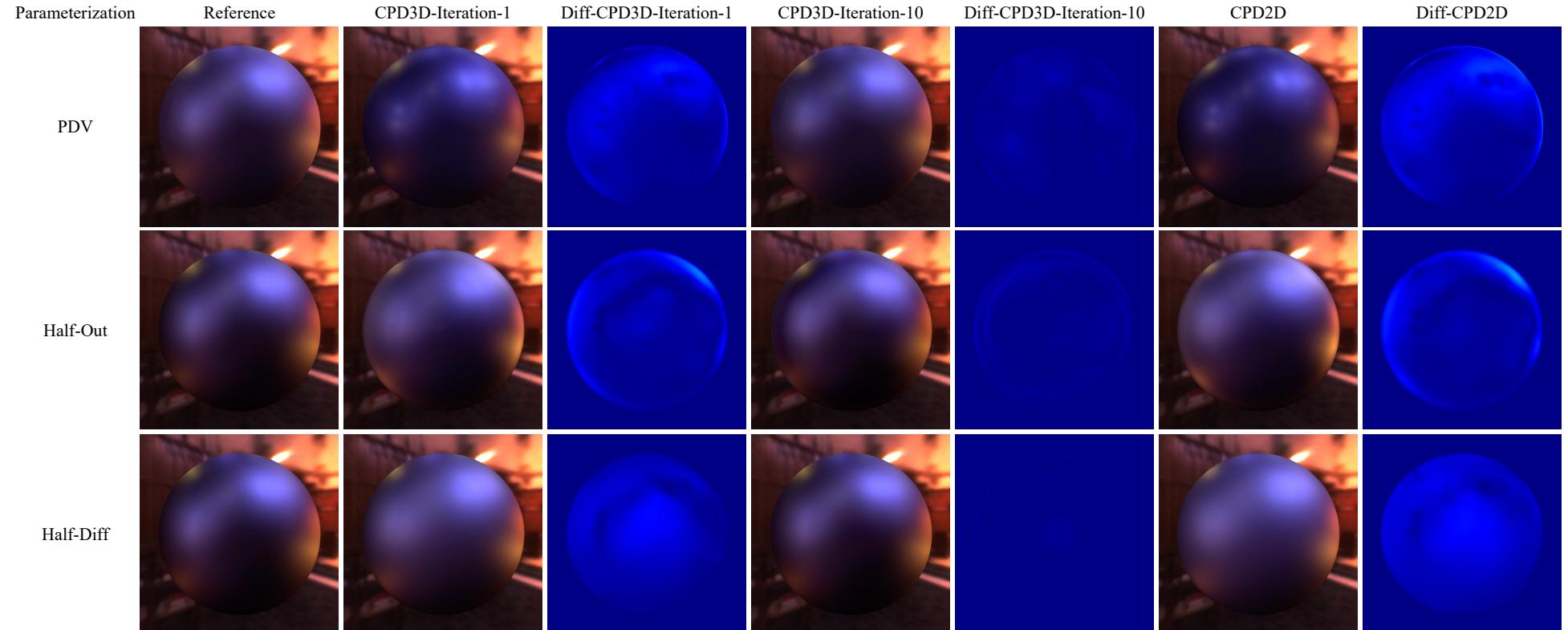
blue-acrylic



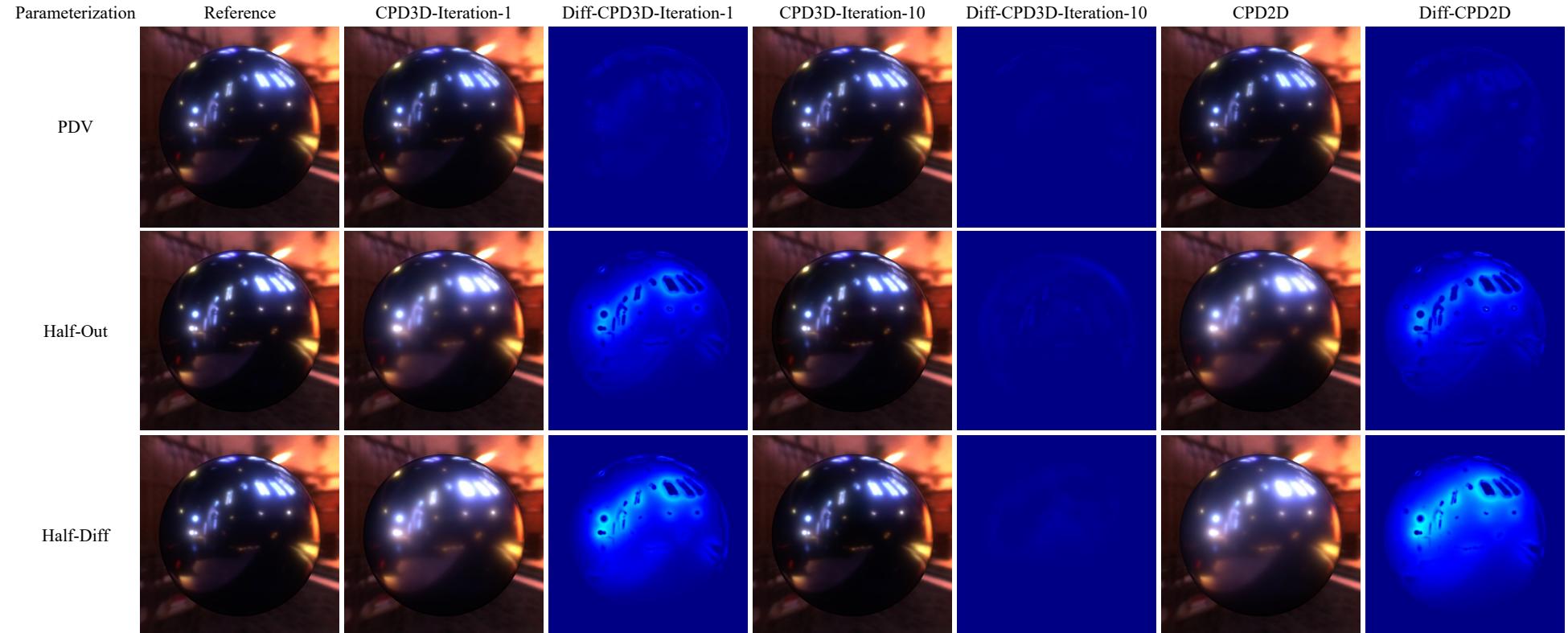
blue-fabric



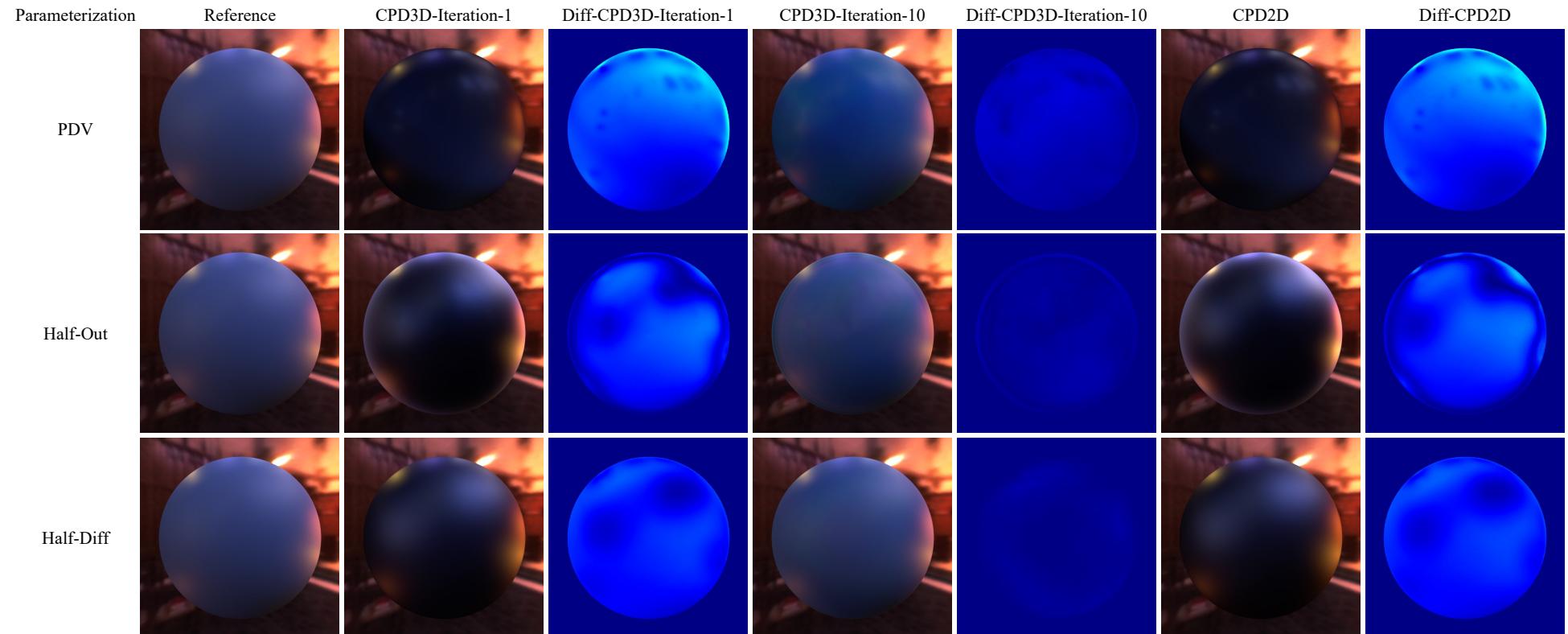
blue-metallic-paint

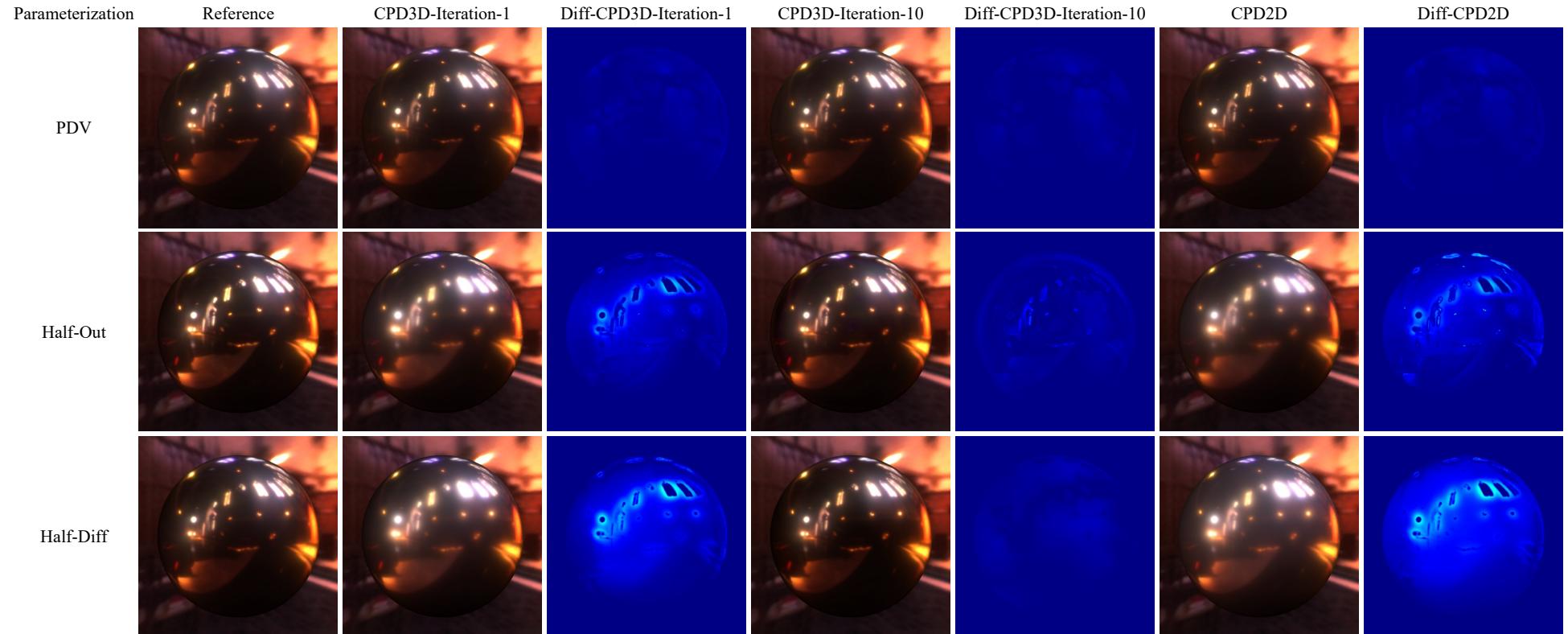


blue-metallic-paint2

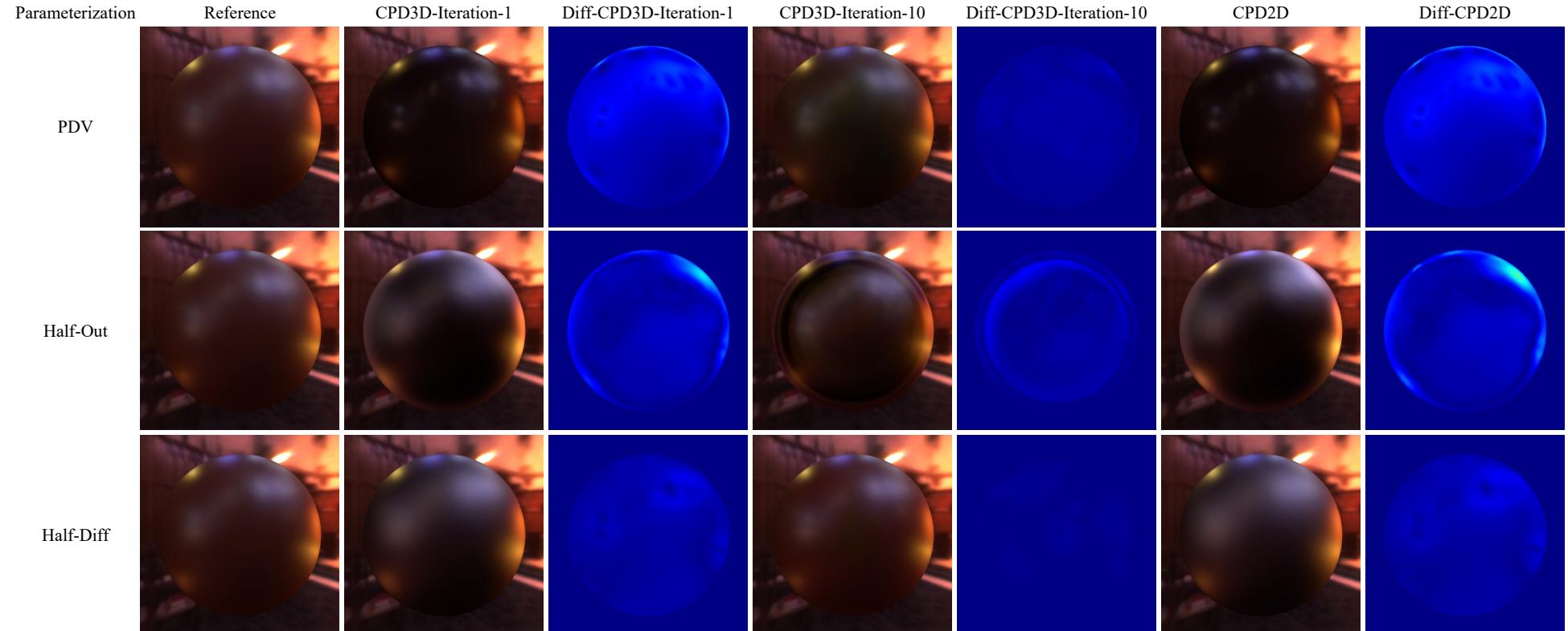


blue-rubber

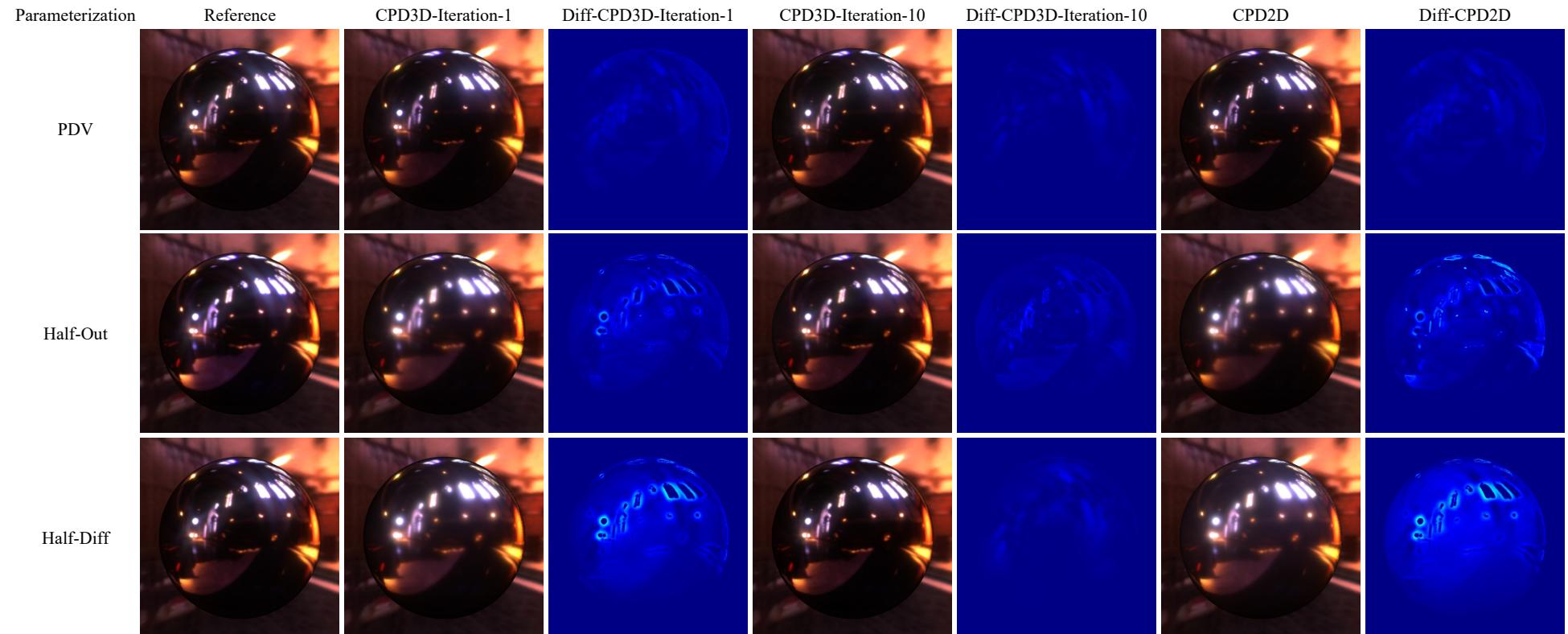


brass

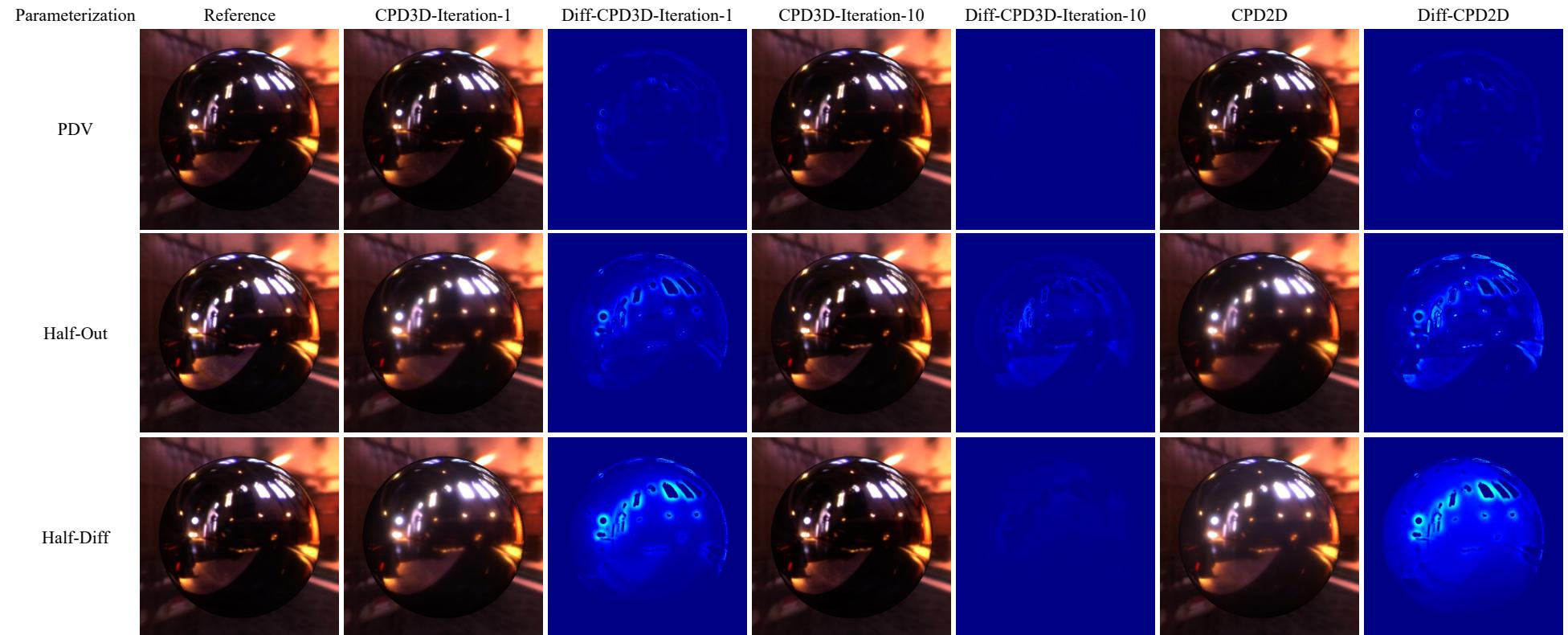
cherry-235



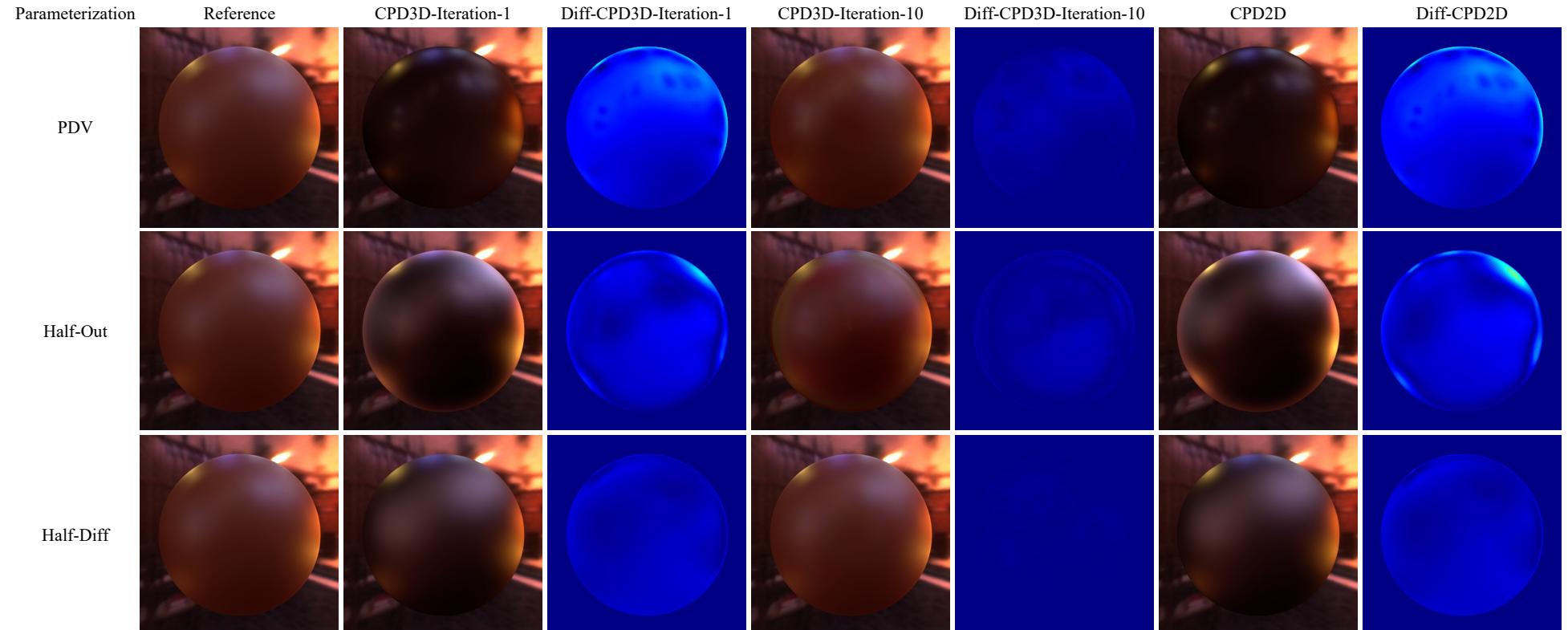
chrome-steel



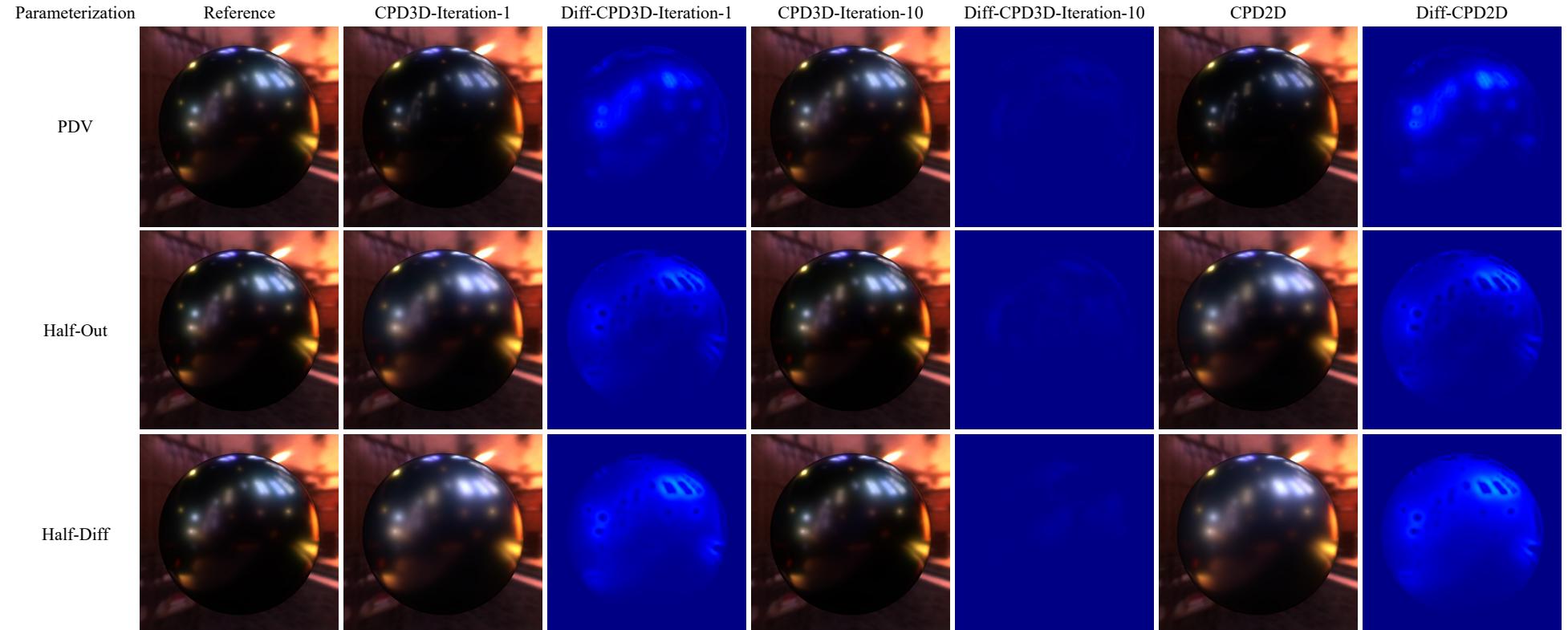
chrome



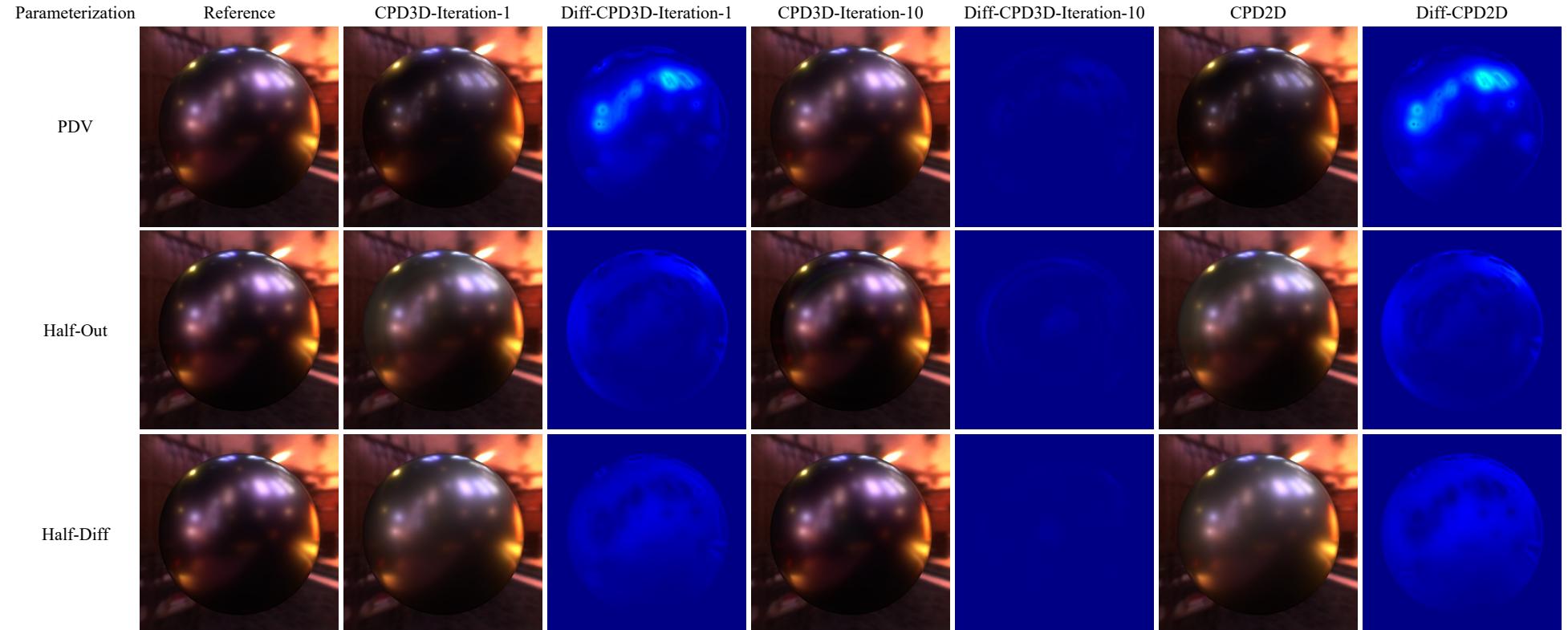
colonial-maple-223



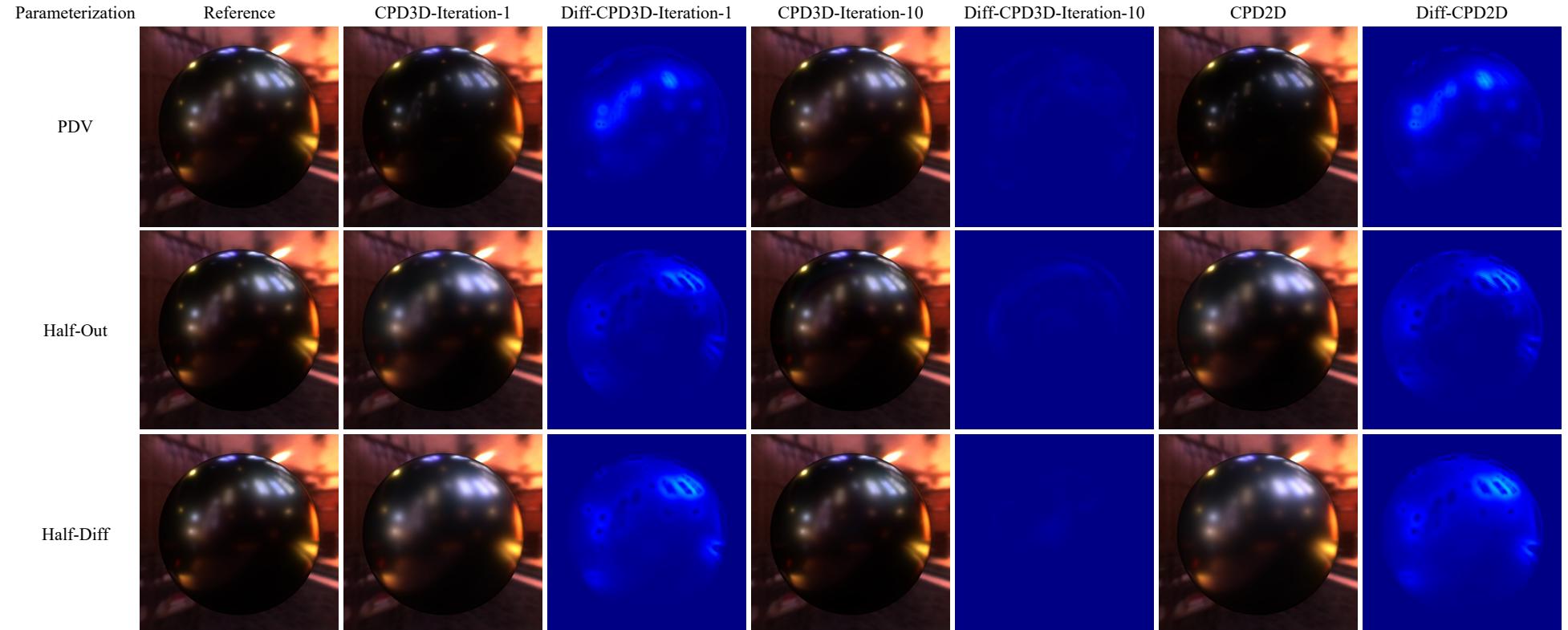
color-changing-paint1



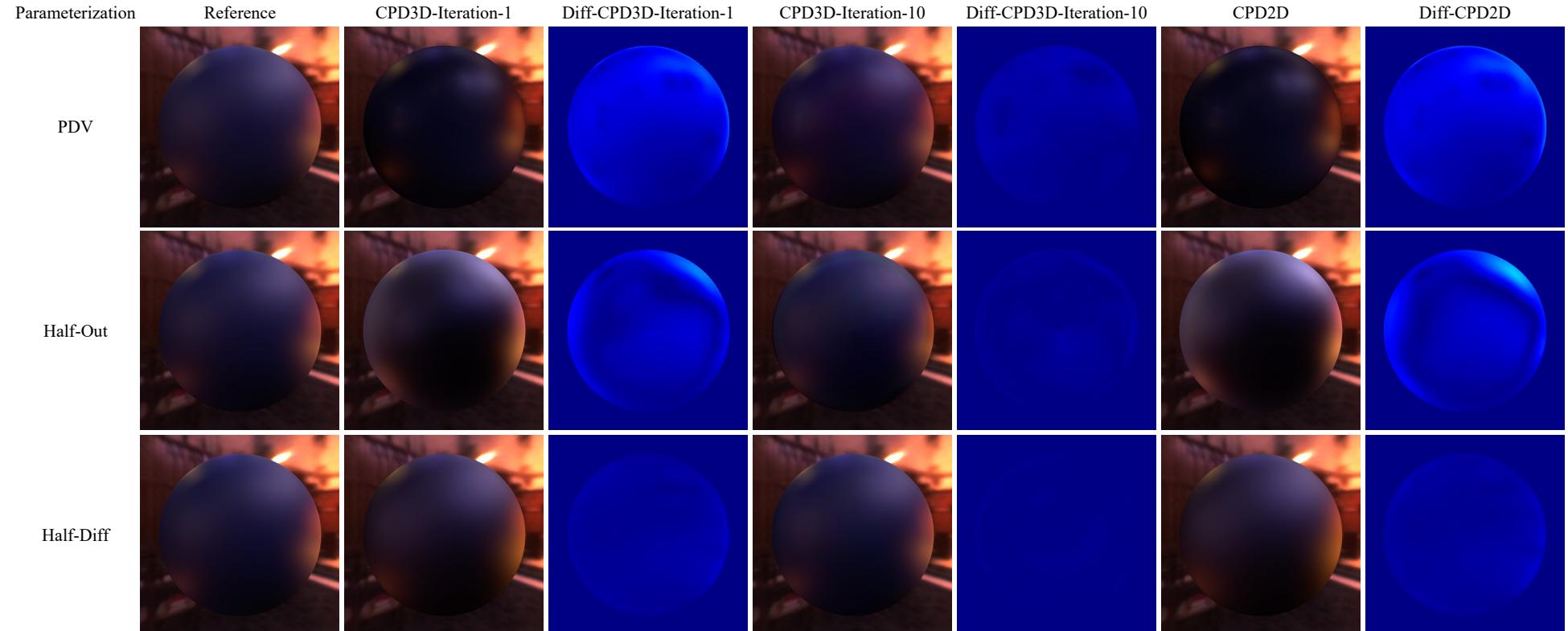
color-changing-paint2



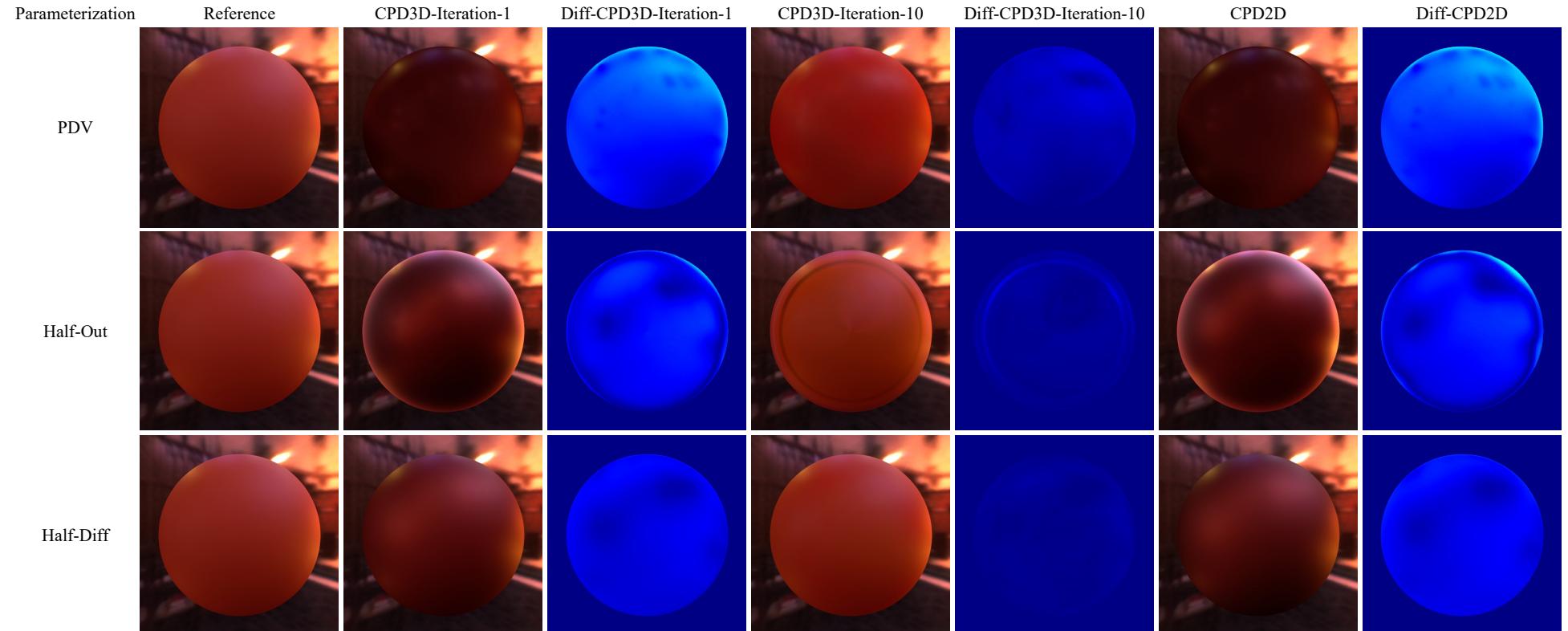
color-changing-paint3



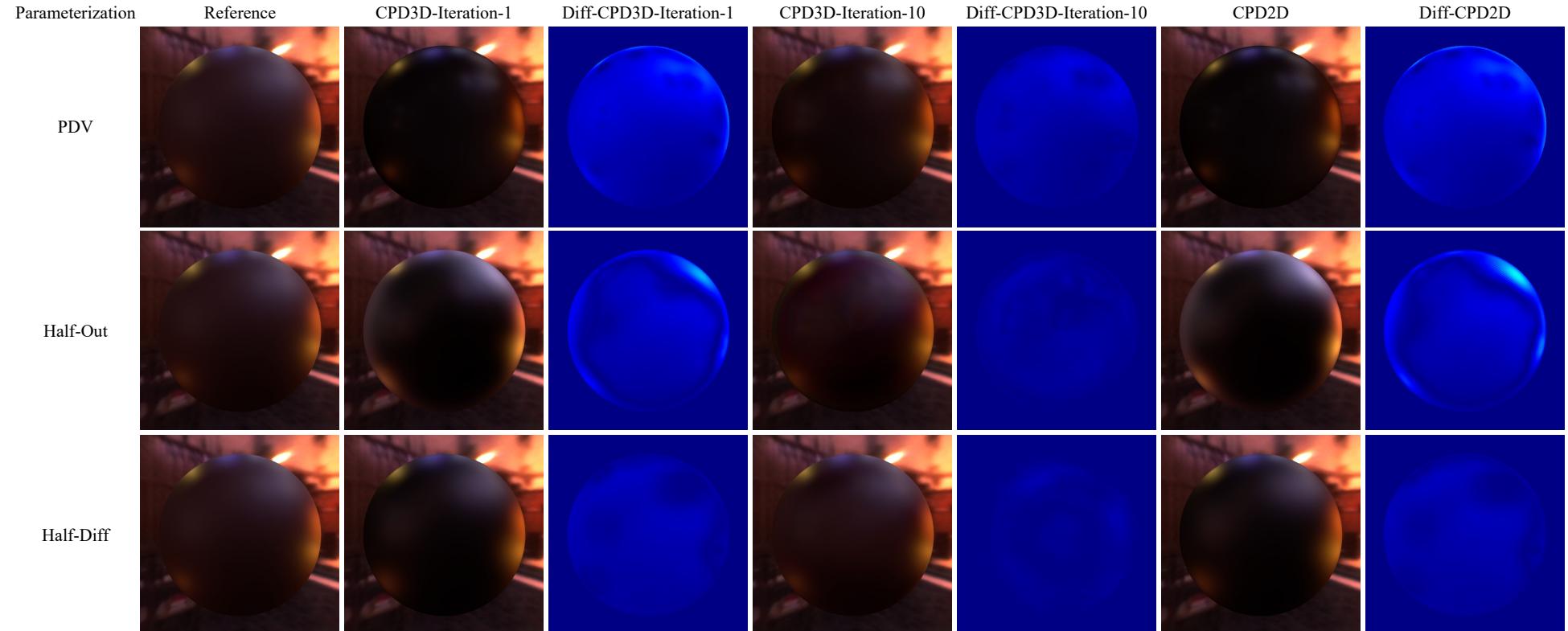
dark-blue-paint

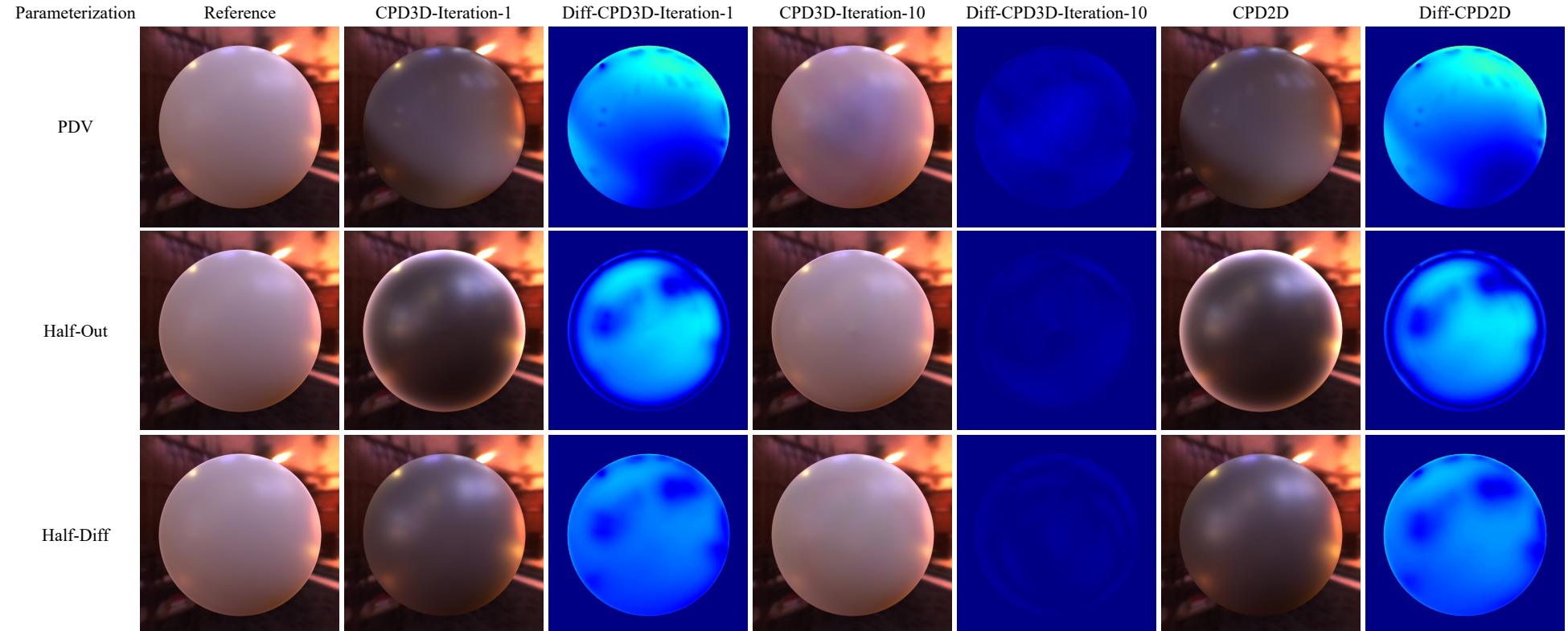


dark-red-paint

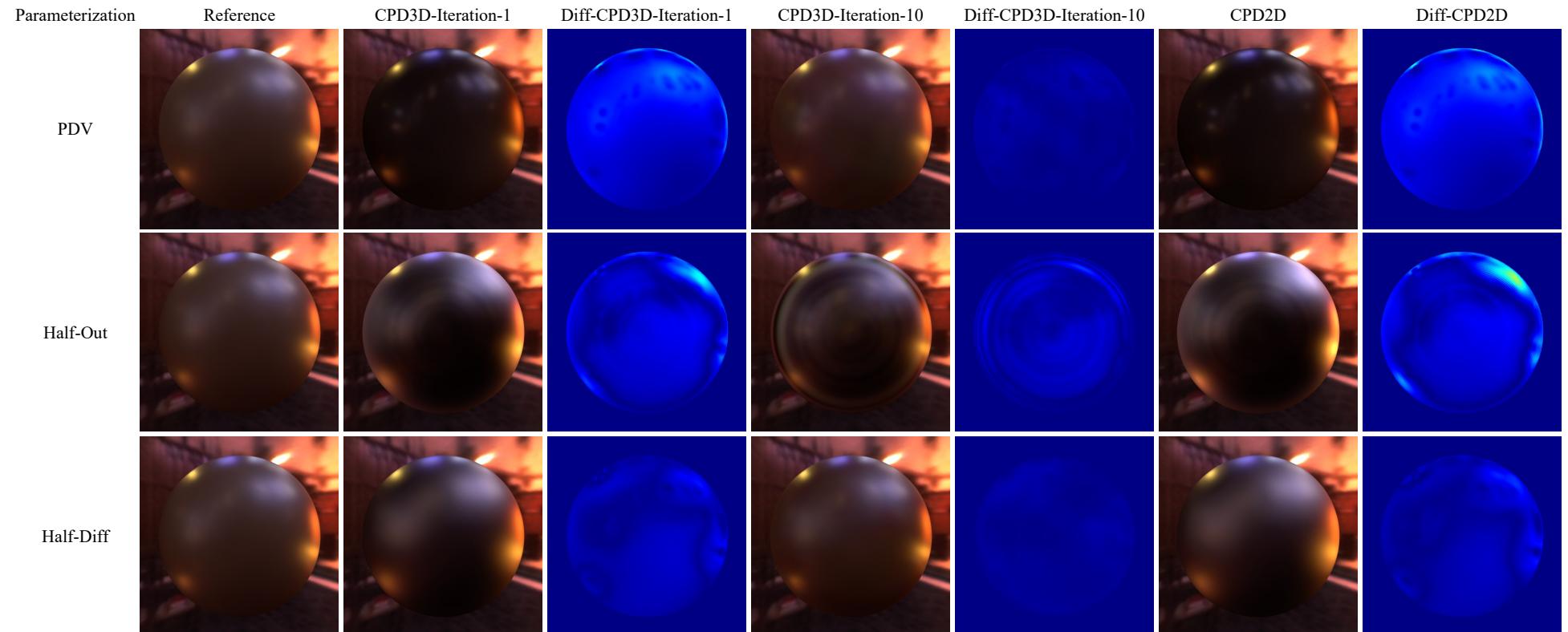


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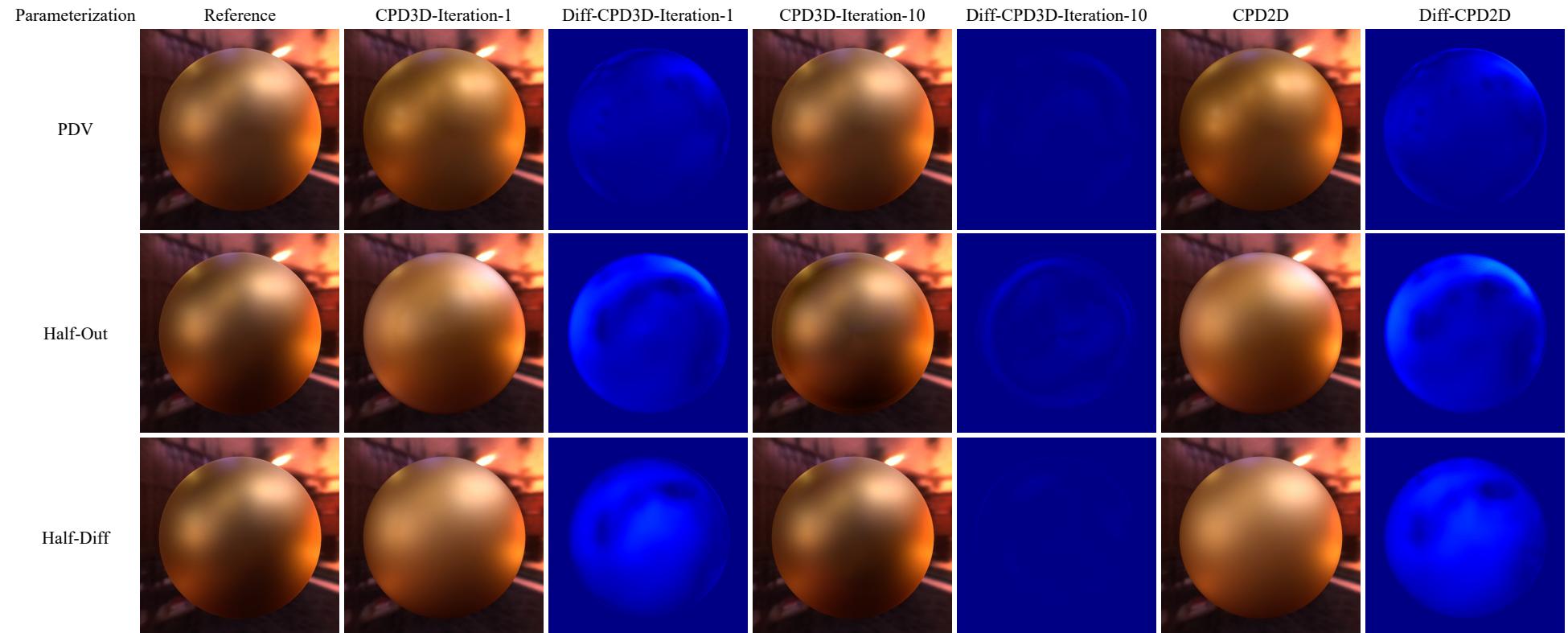


delrin

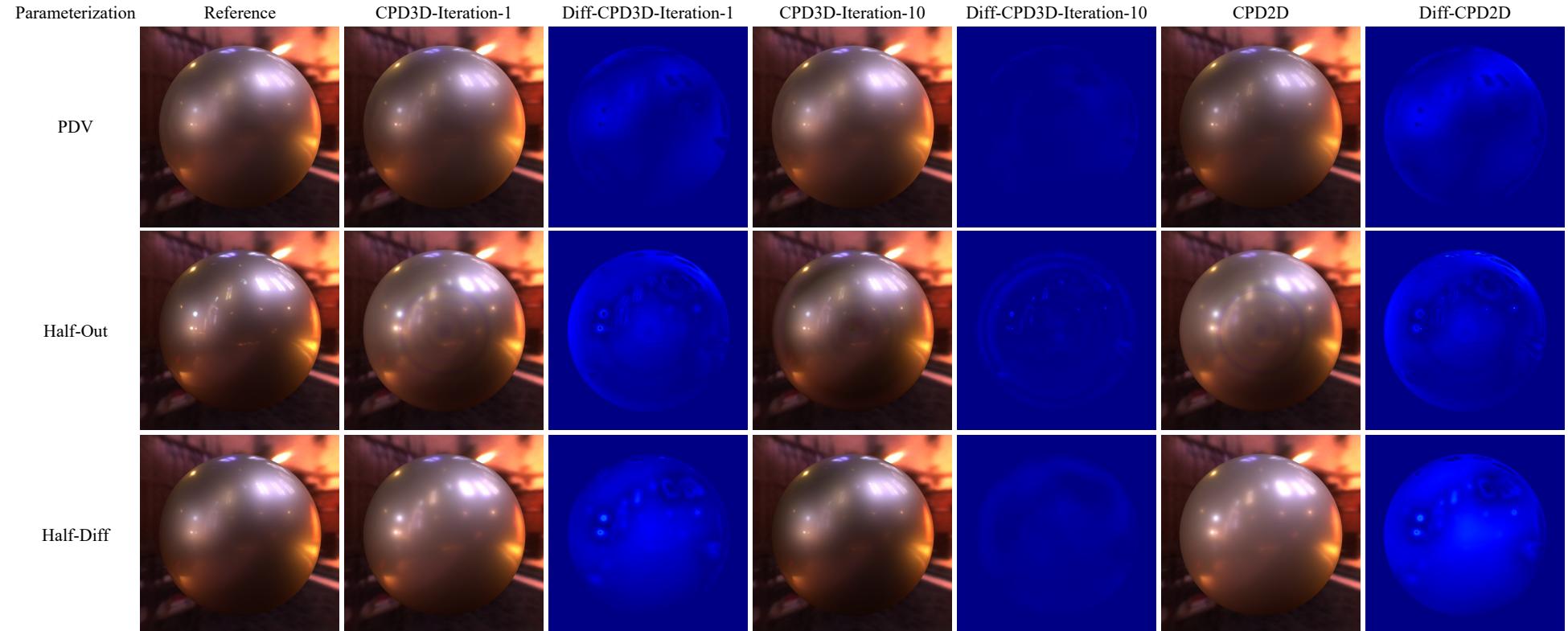
fruitwood-241



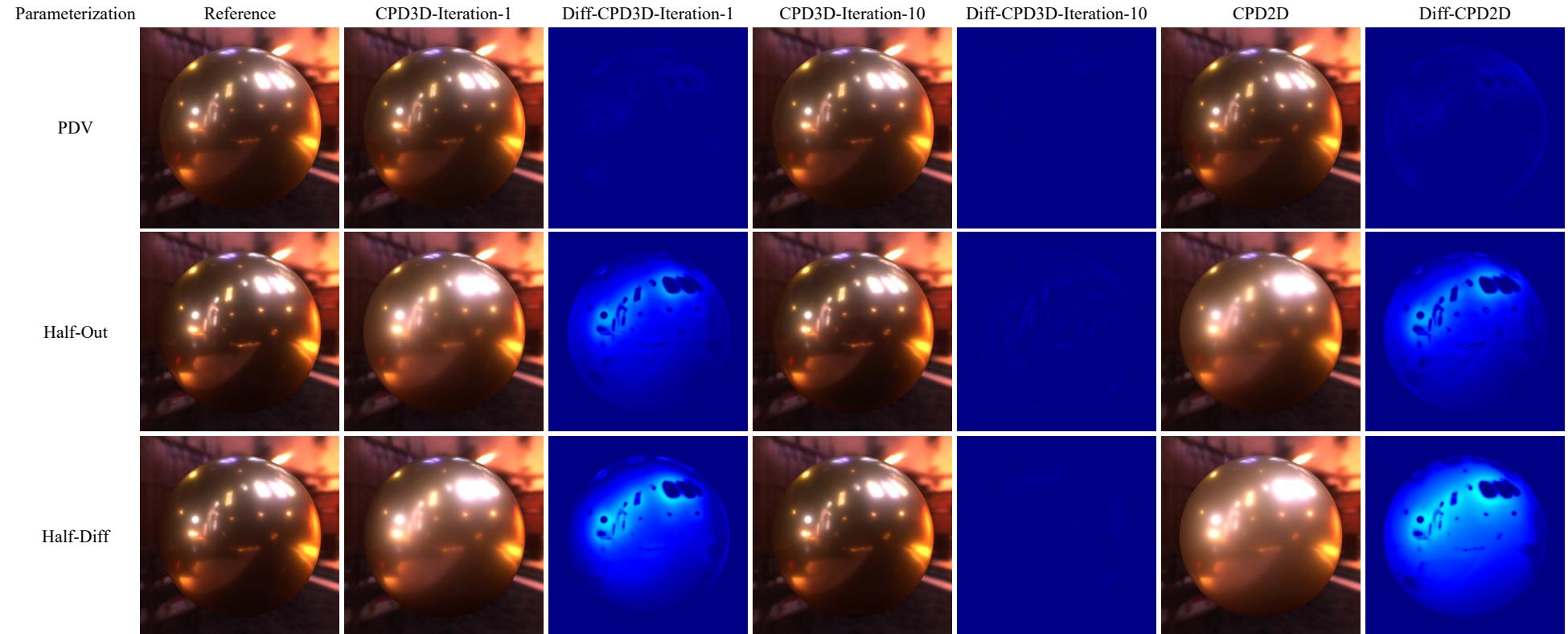
gold-metallic-paint



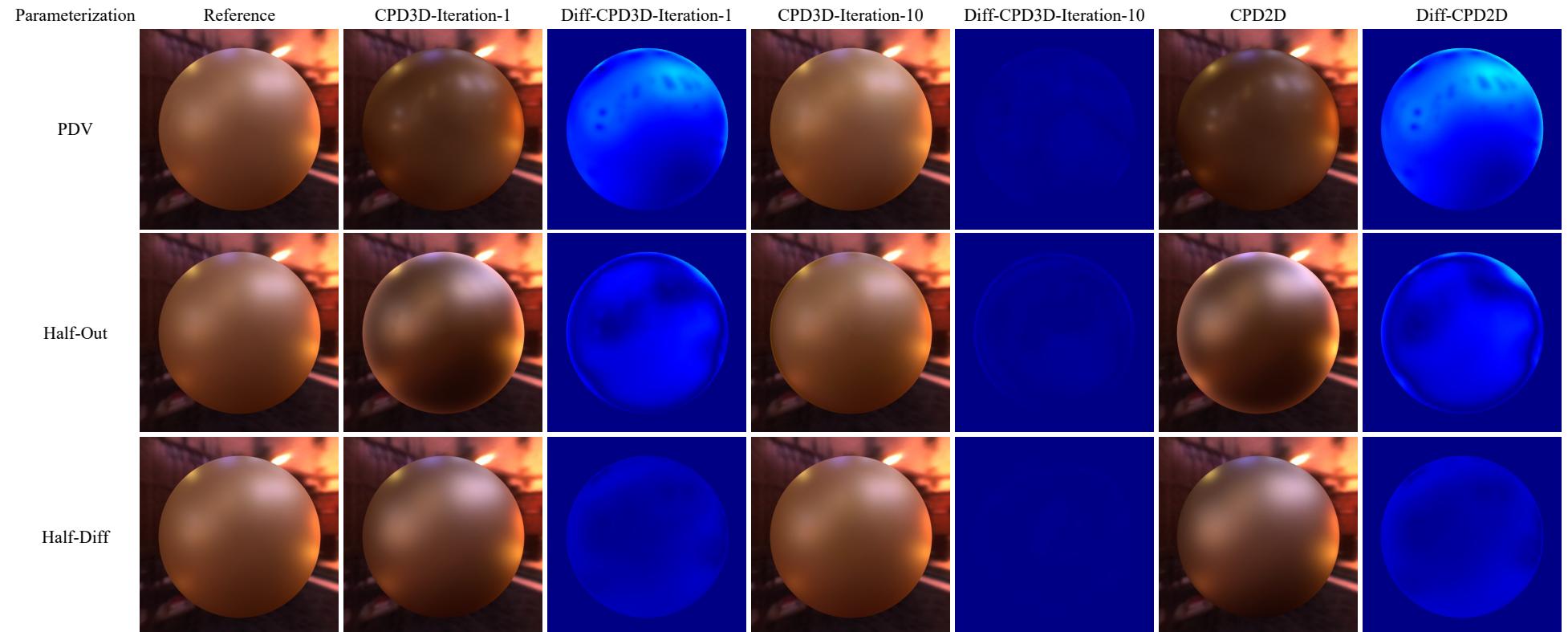
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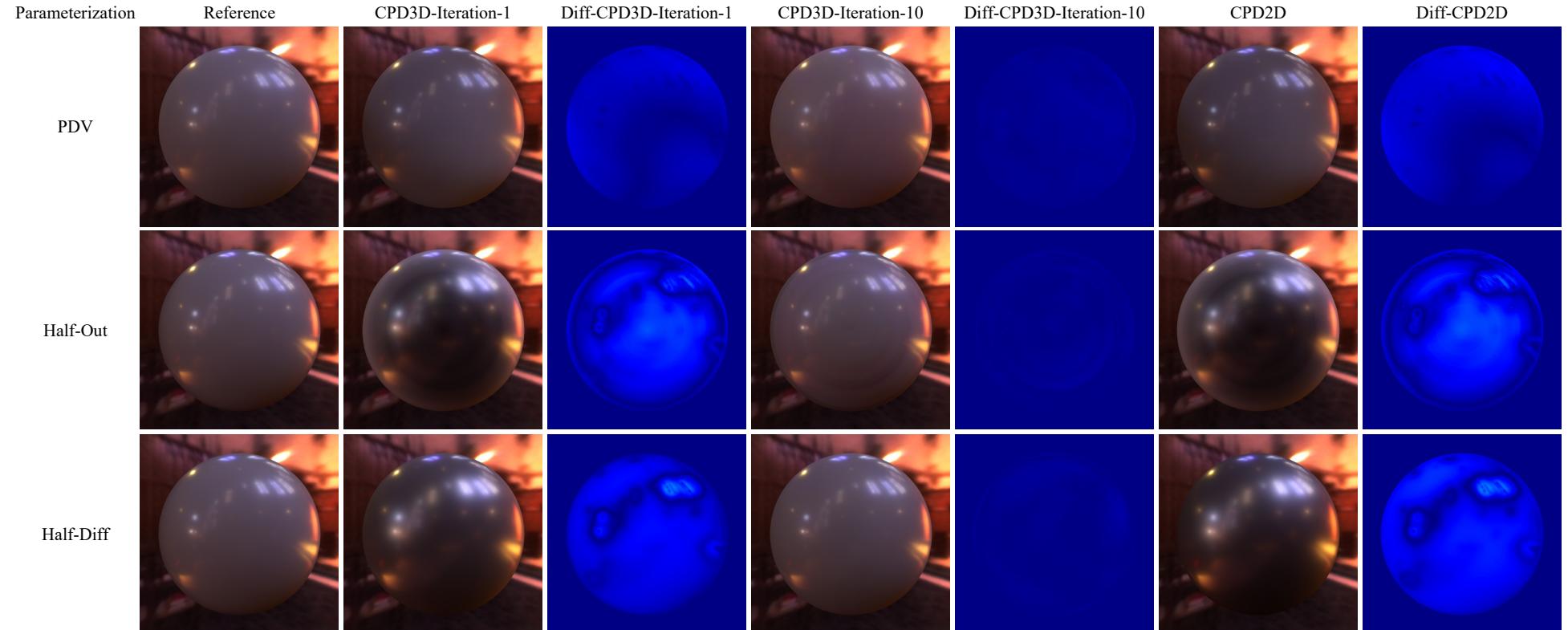
gold-metallic-paint3



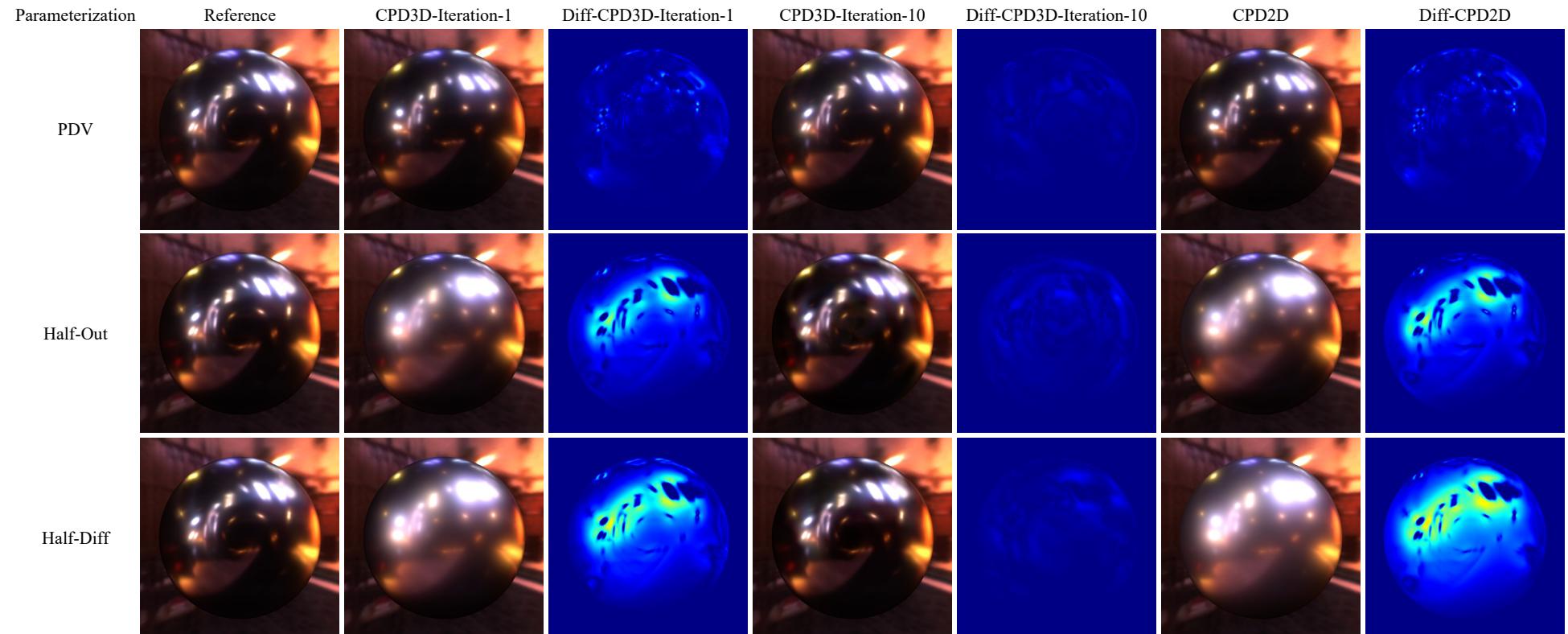
gold-paint



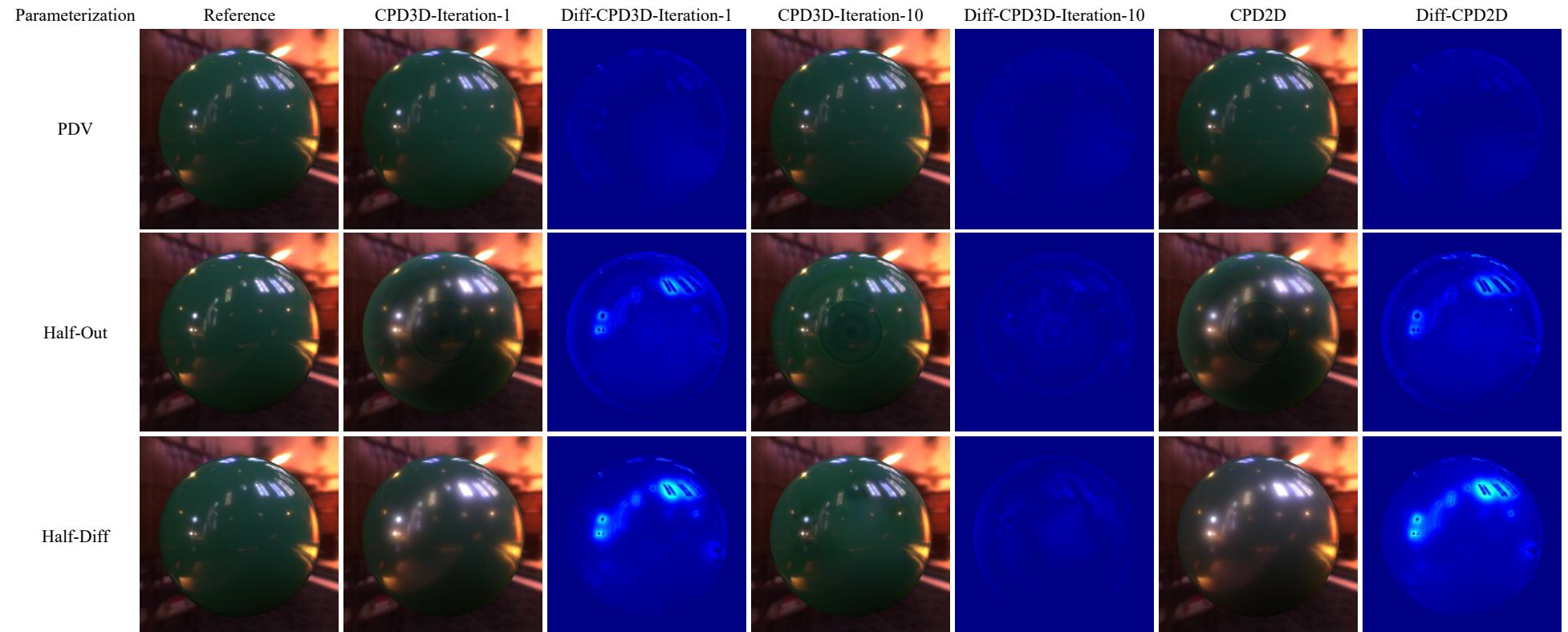
gray-plastic



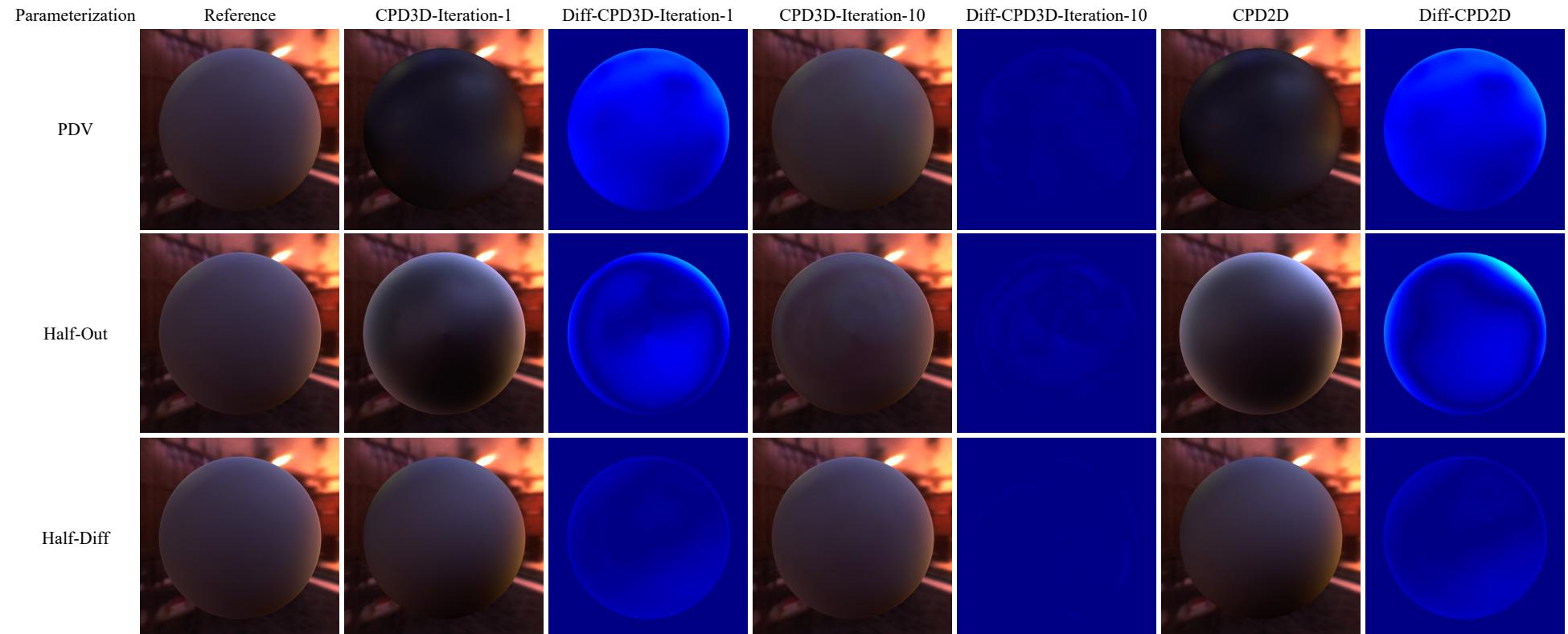
grease-covered-steel



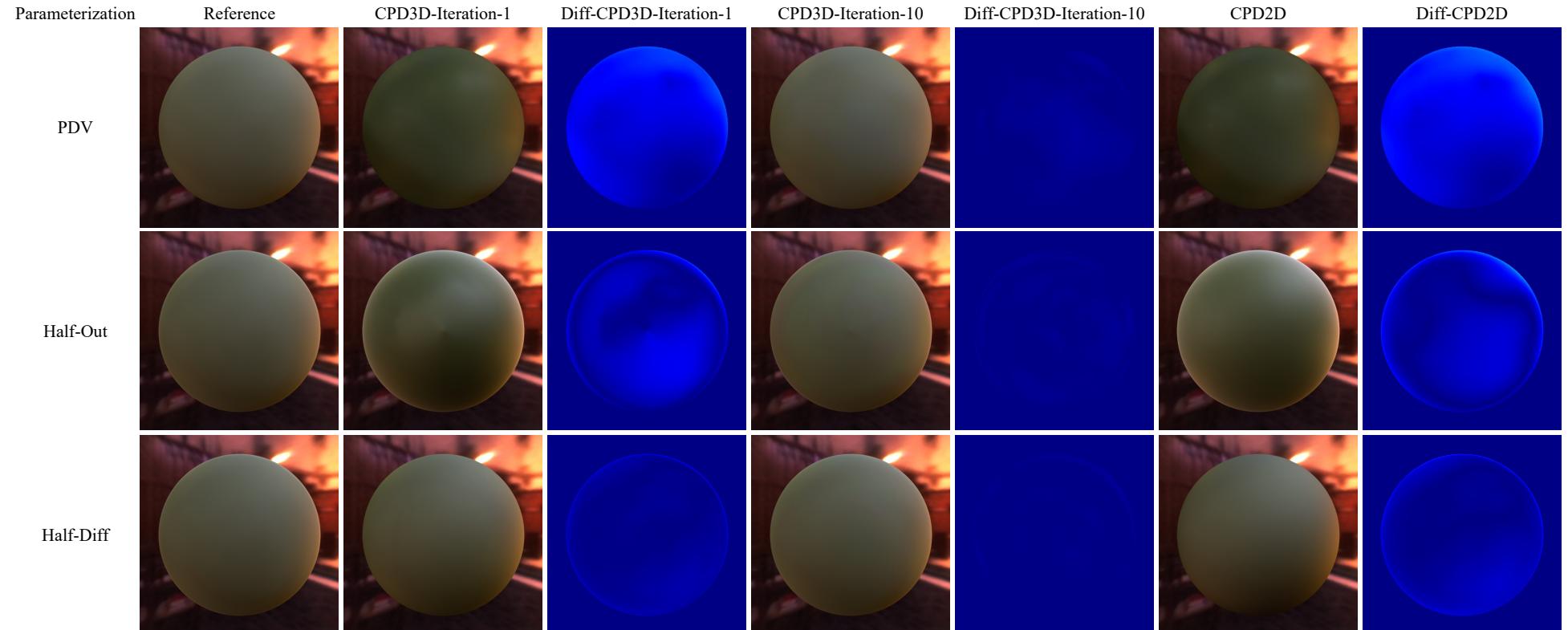
green-acrylic



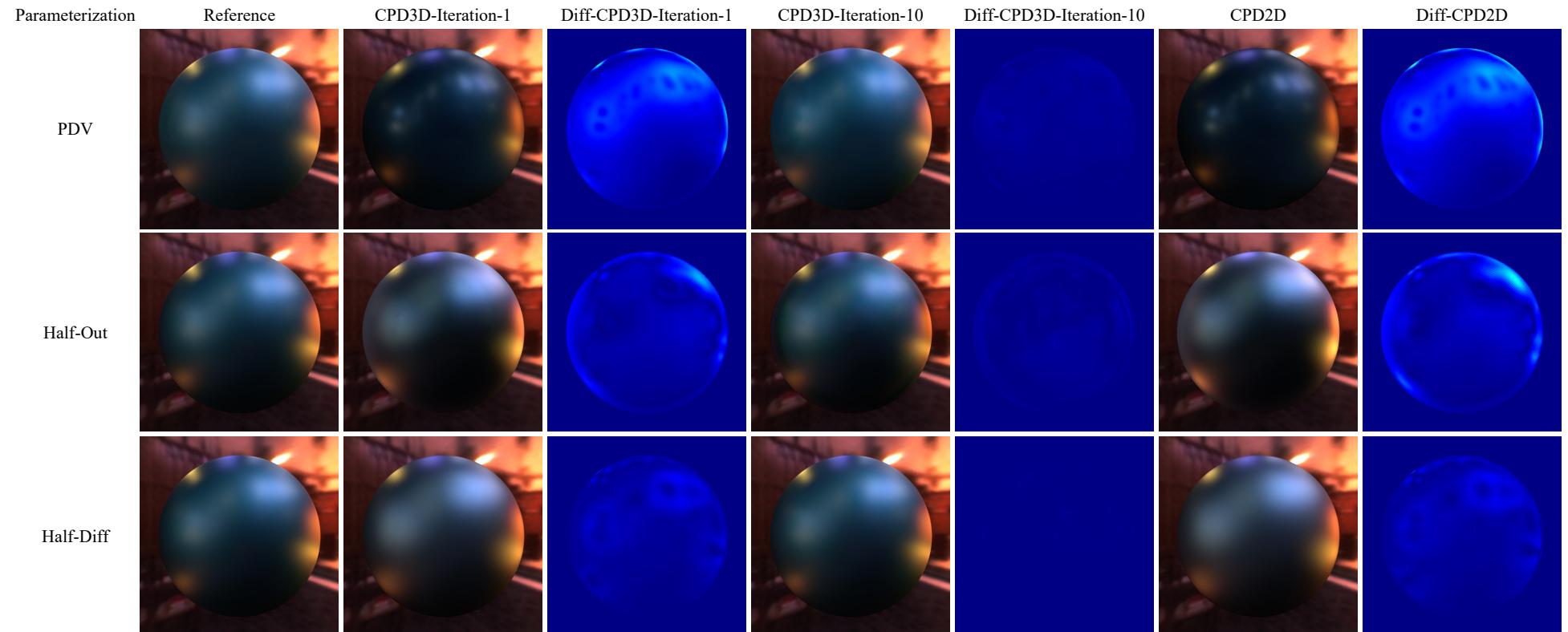
green-fabric



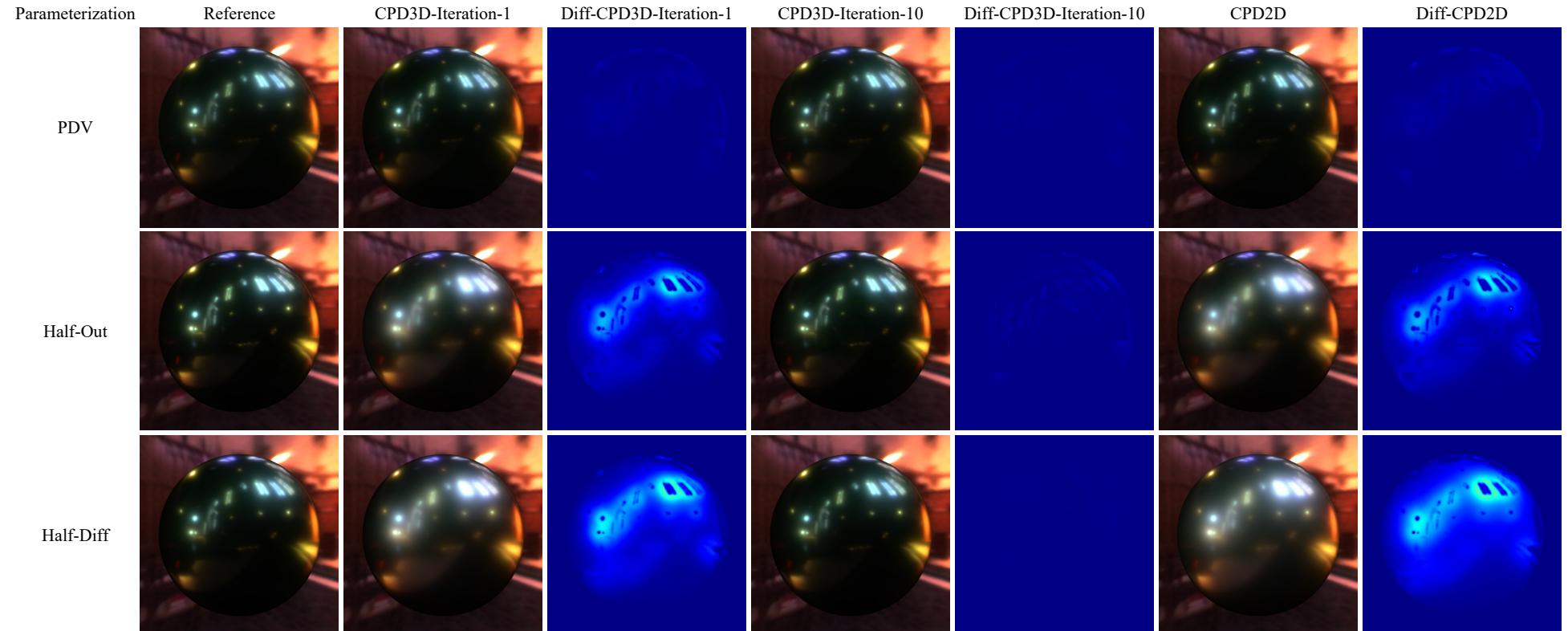
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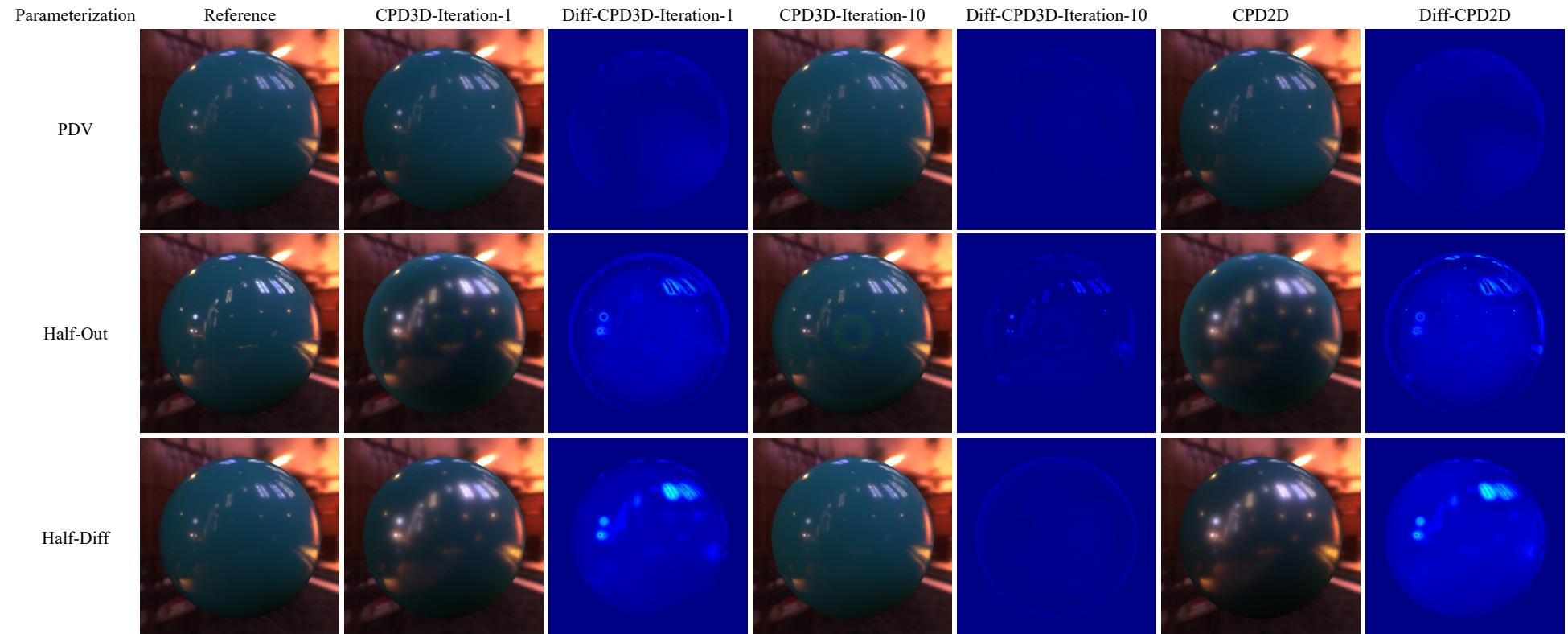
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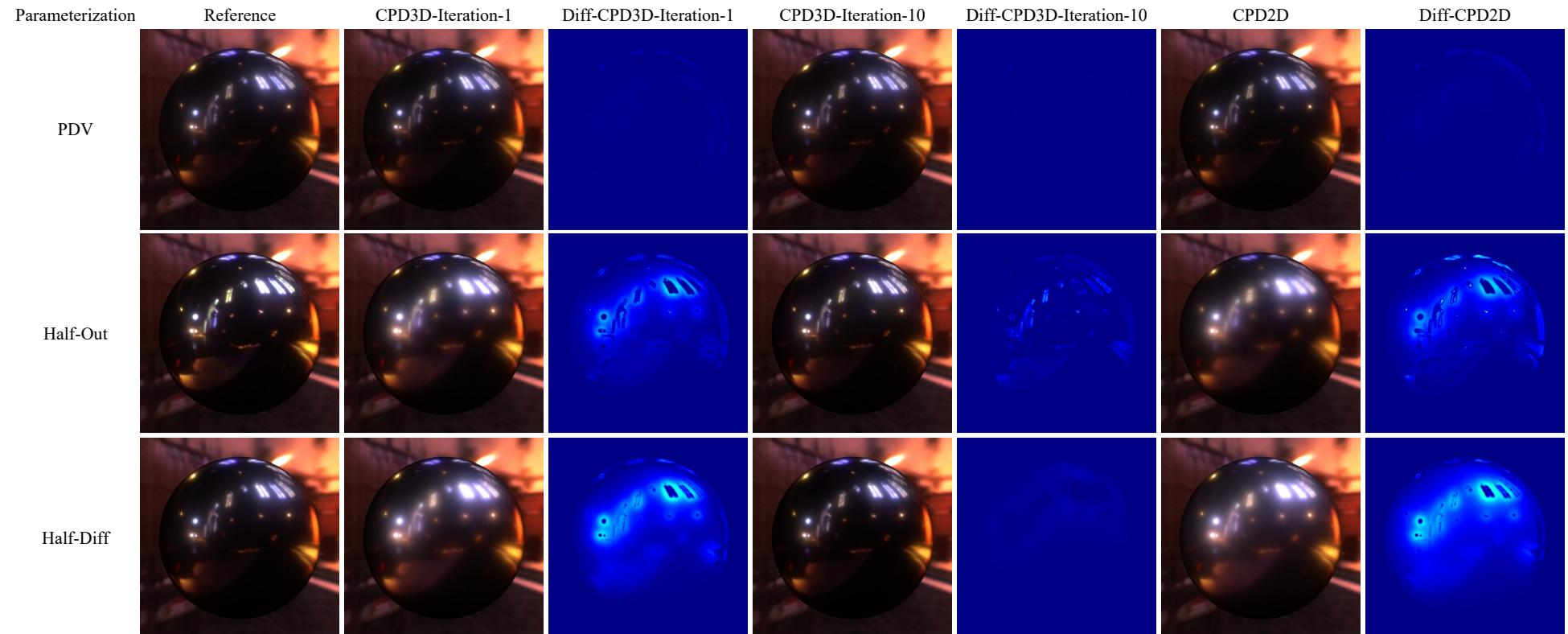
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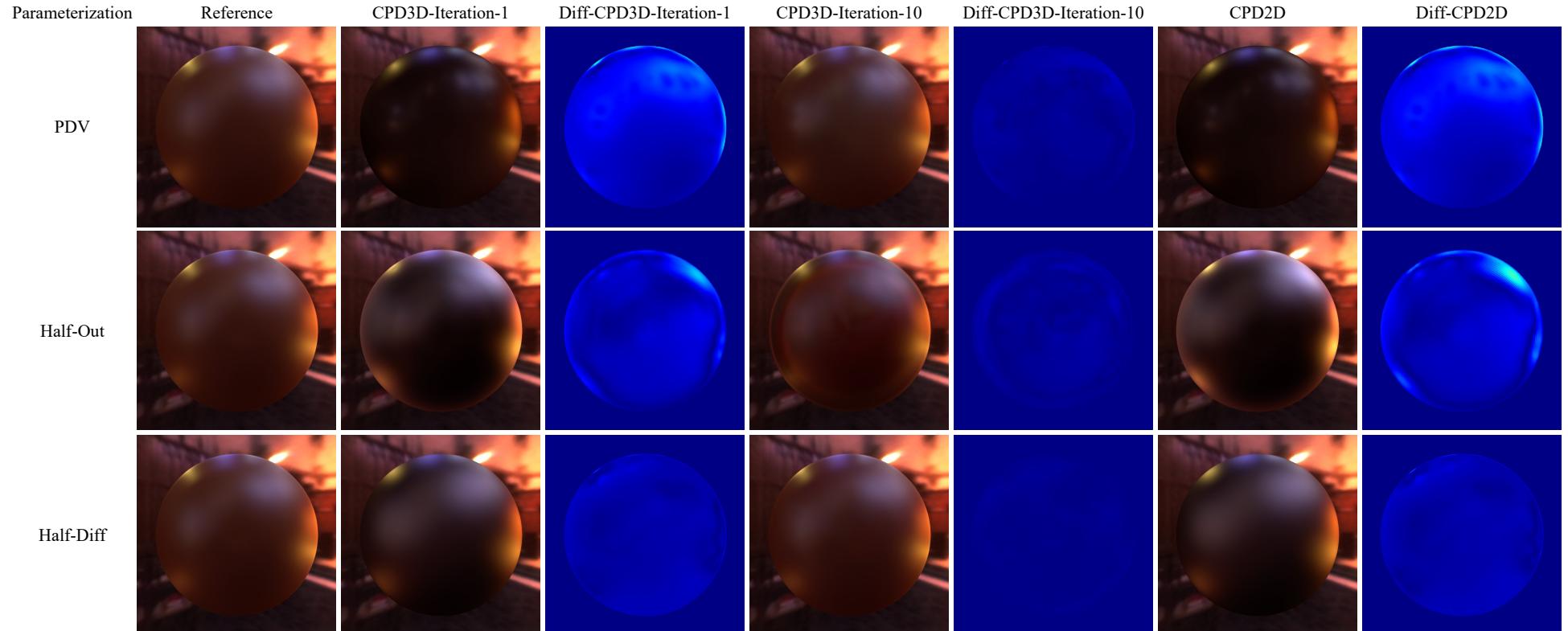
green-plastic



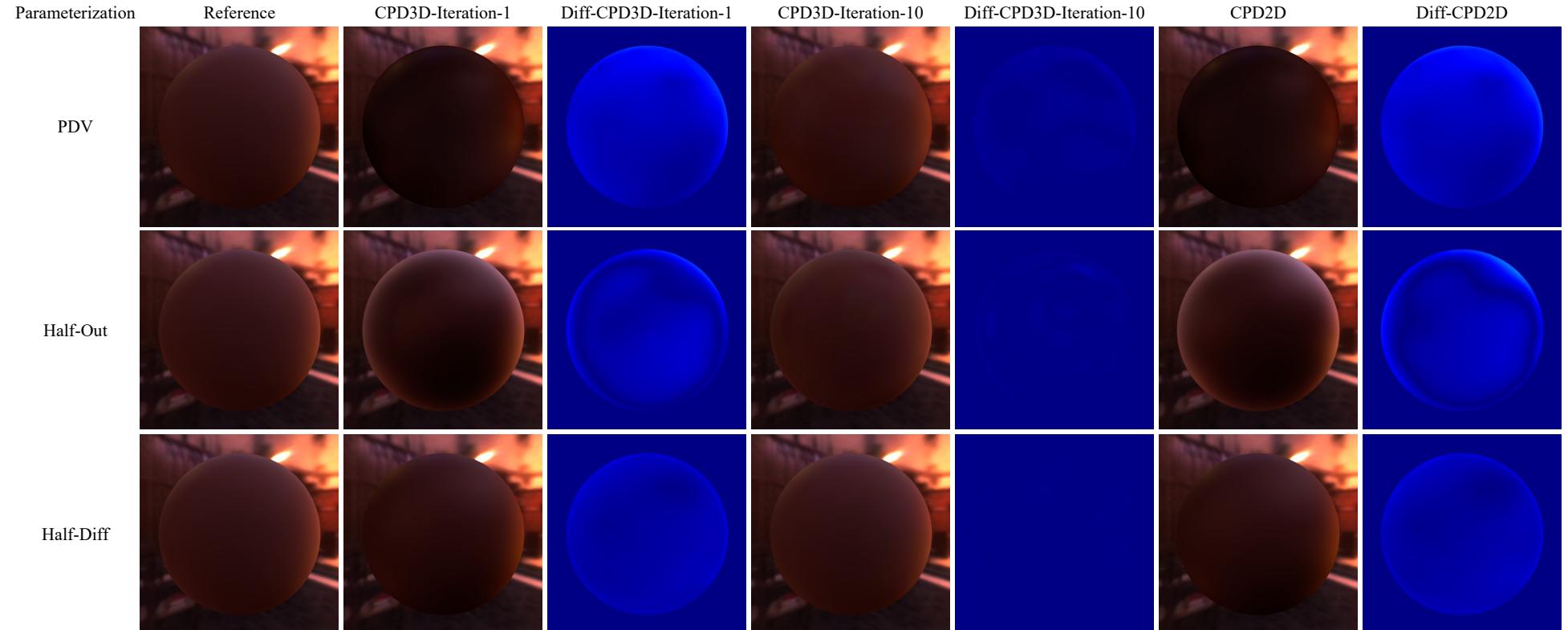
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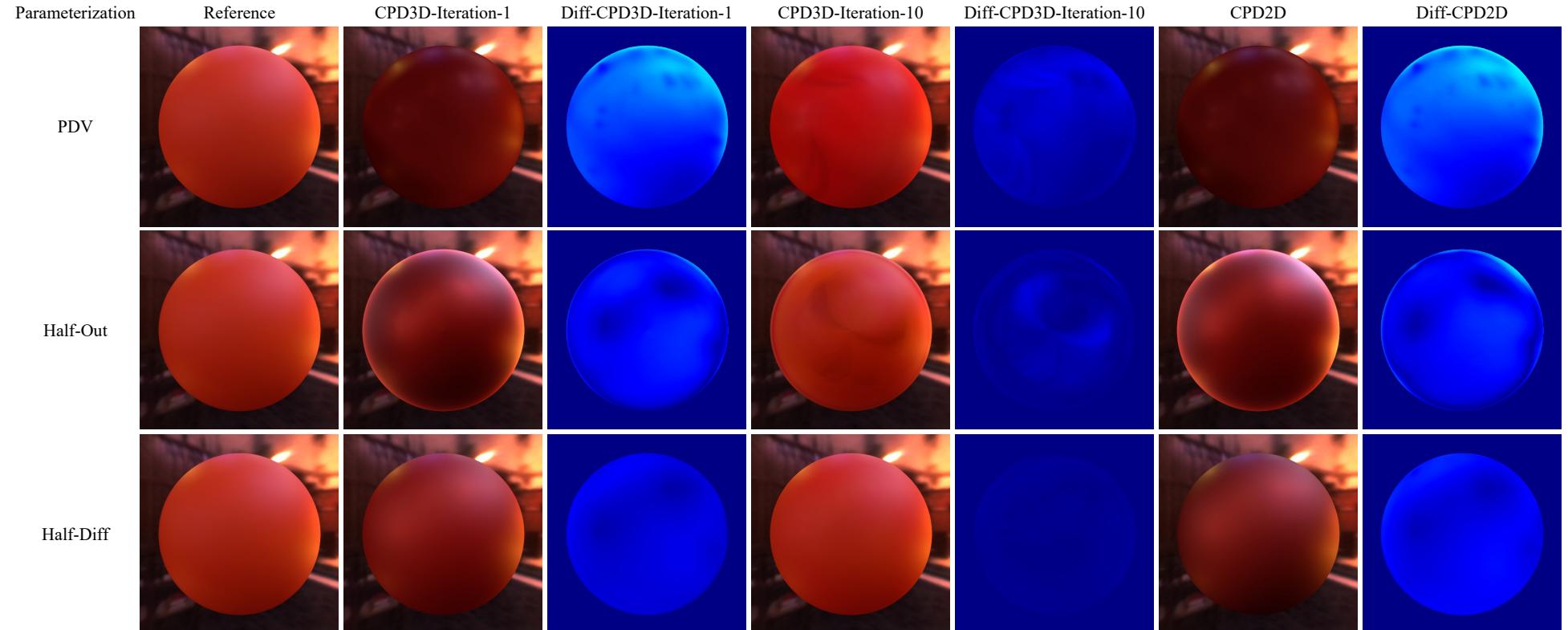
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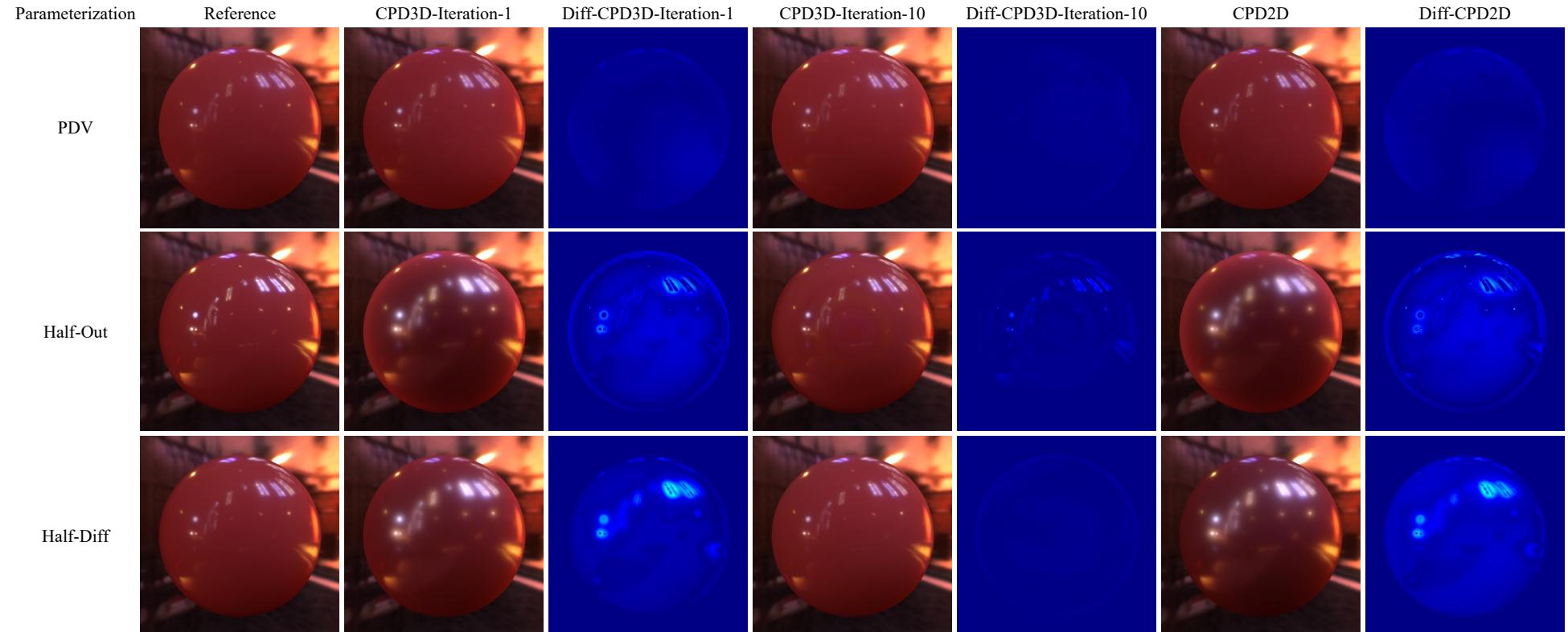
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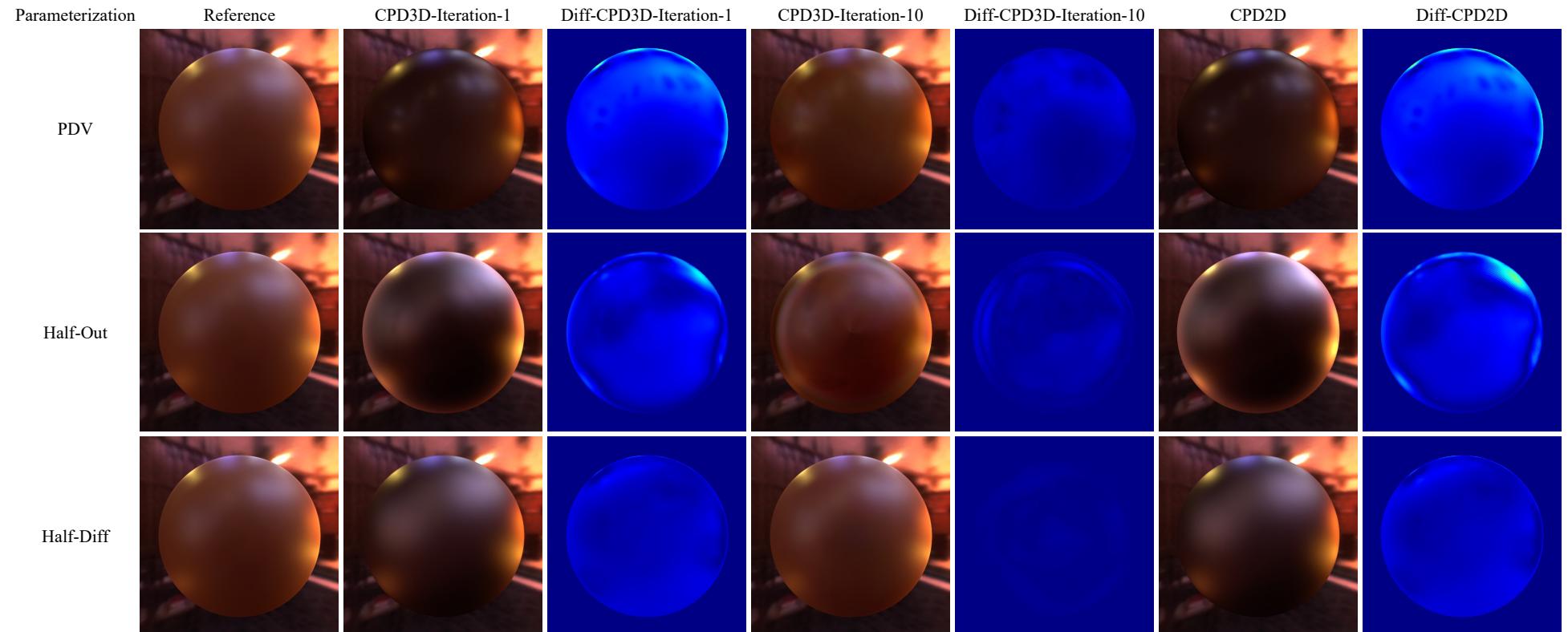
light-red-paint



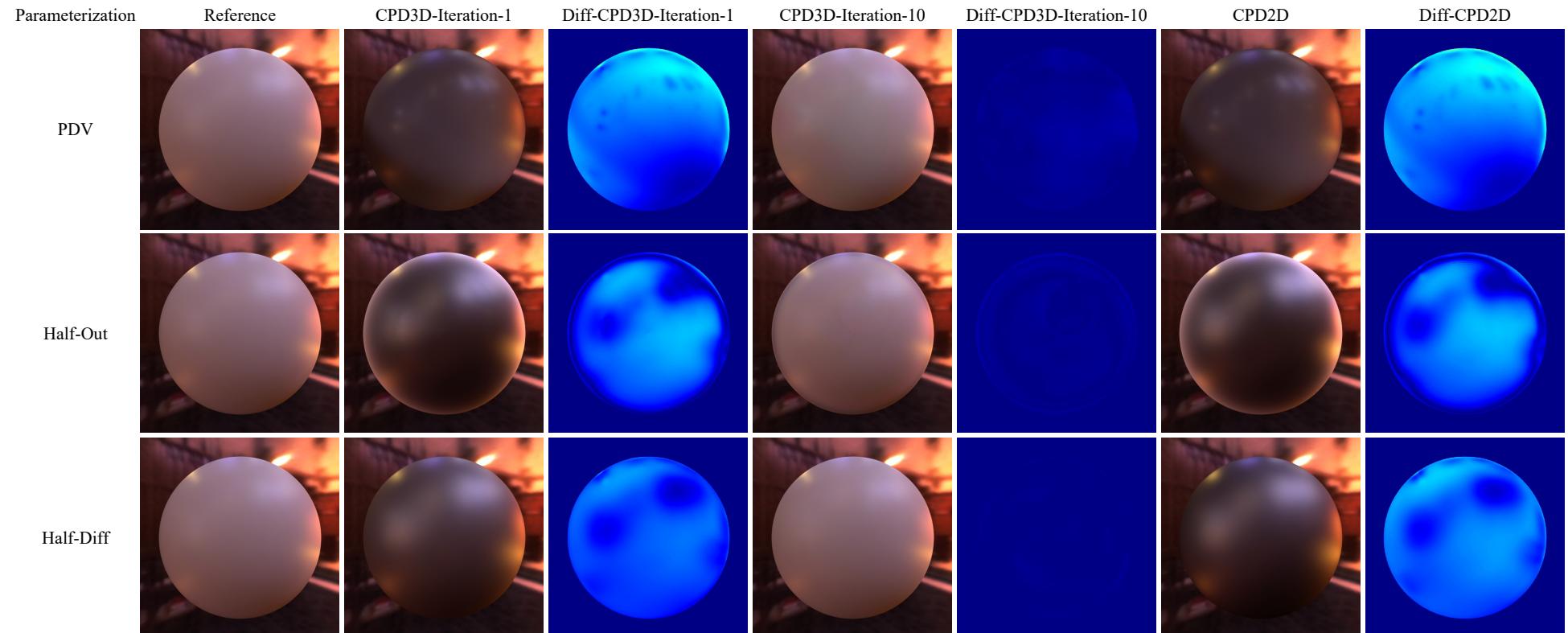
maroon-plastic

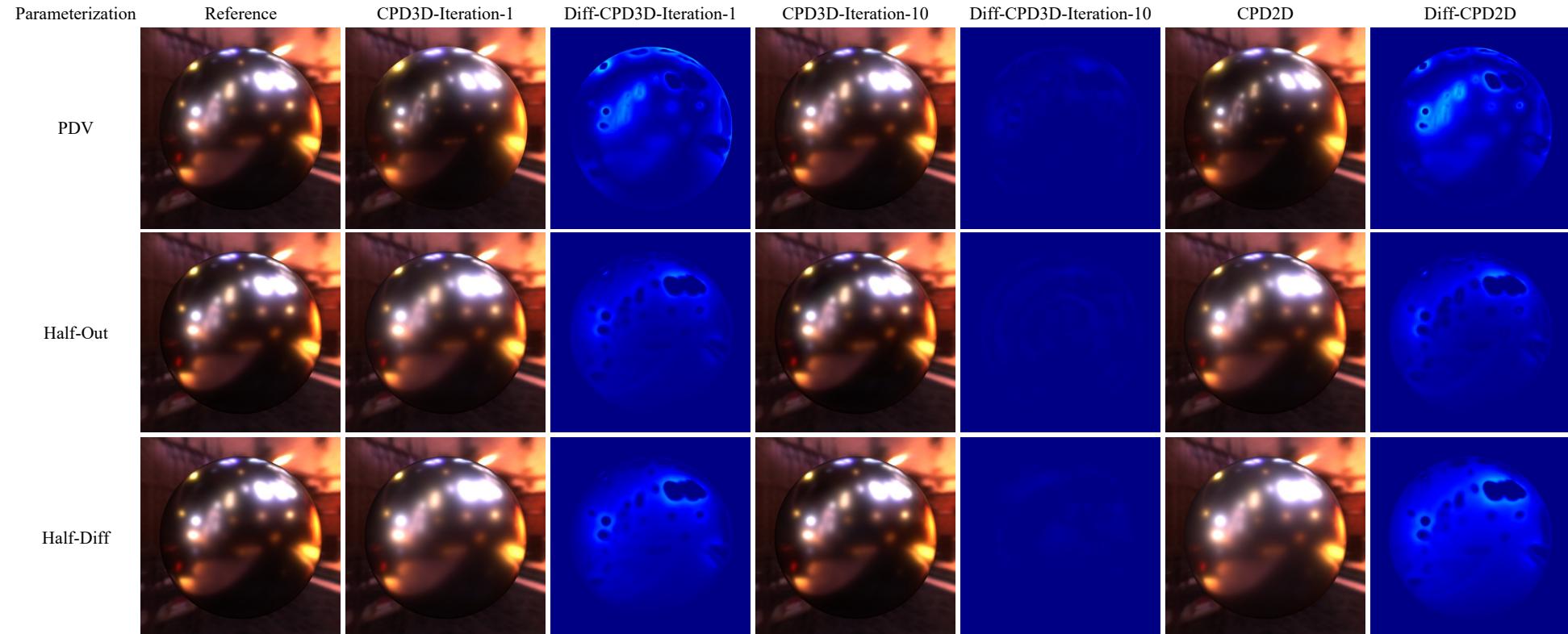


natural-209

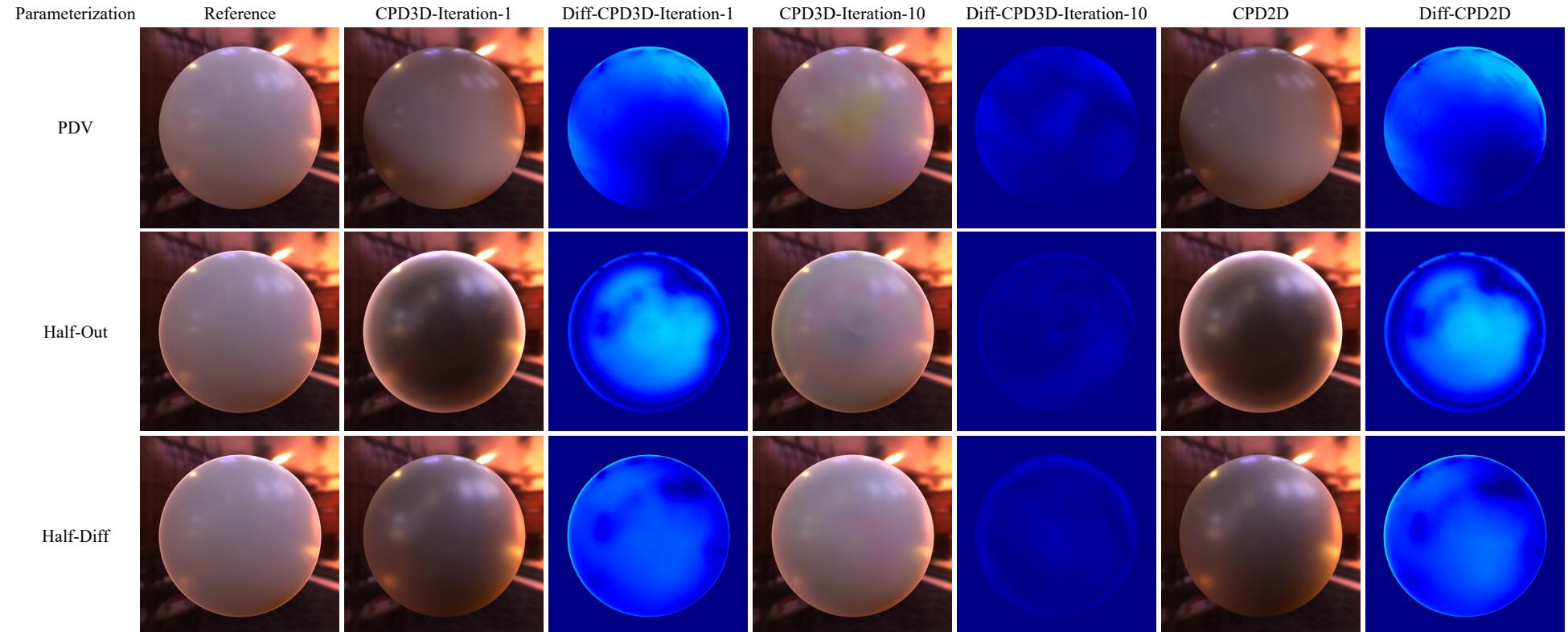


neoprene-rubber

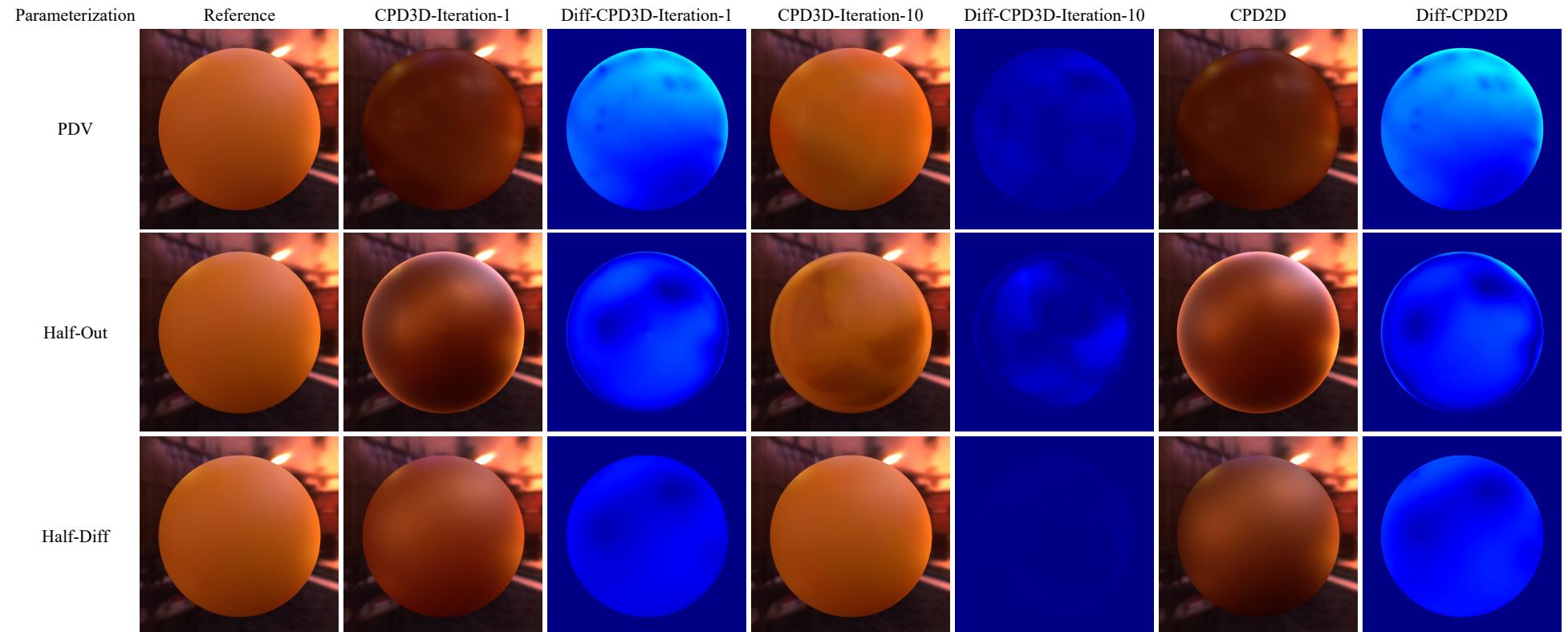


nickel

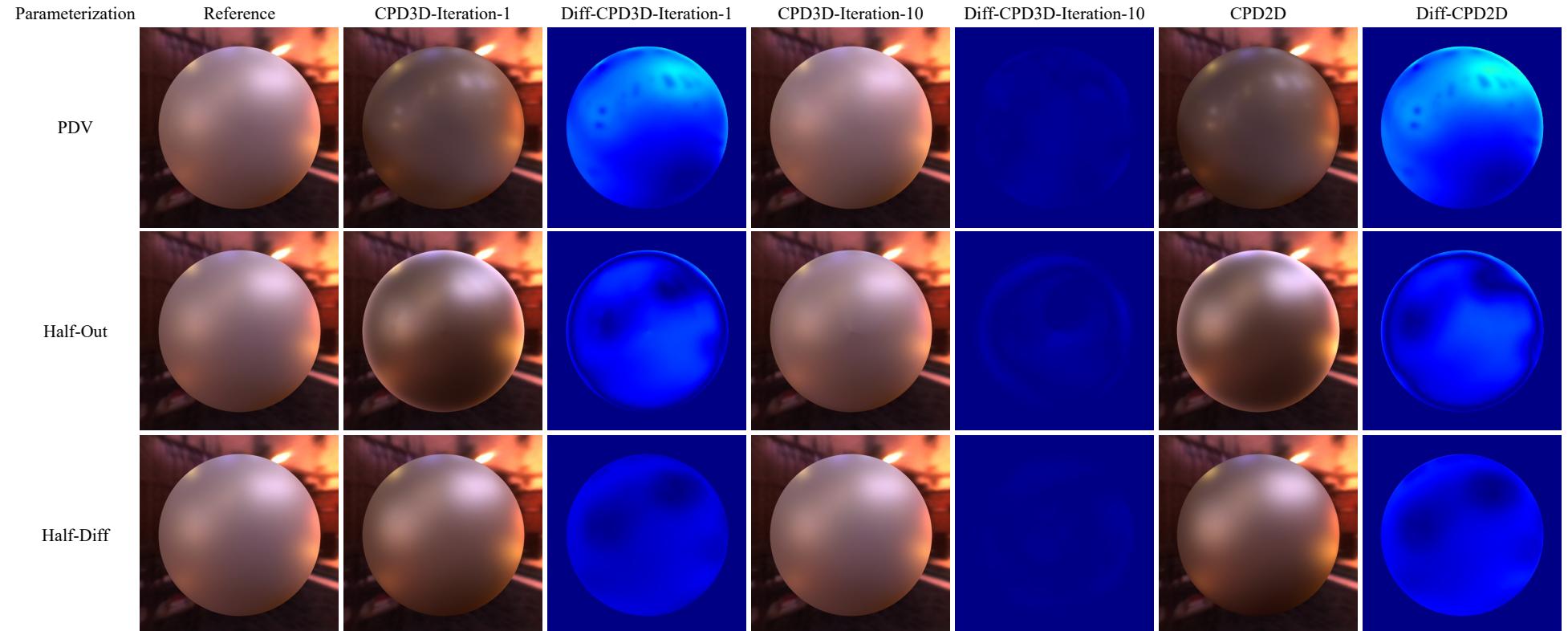
nylon



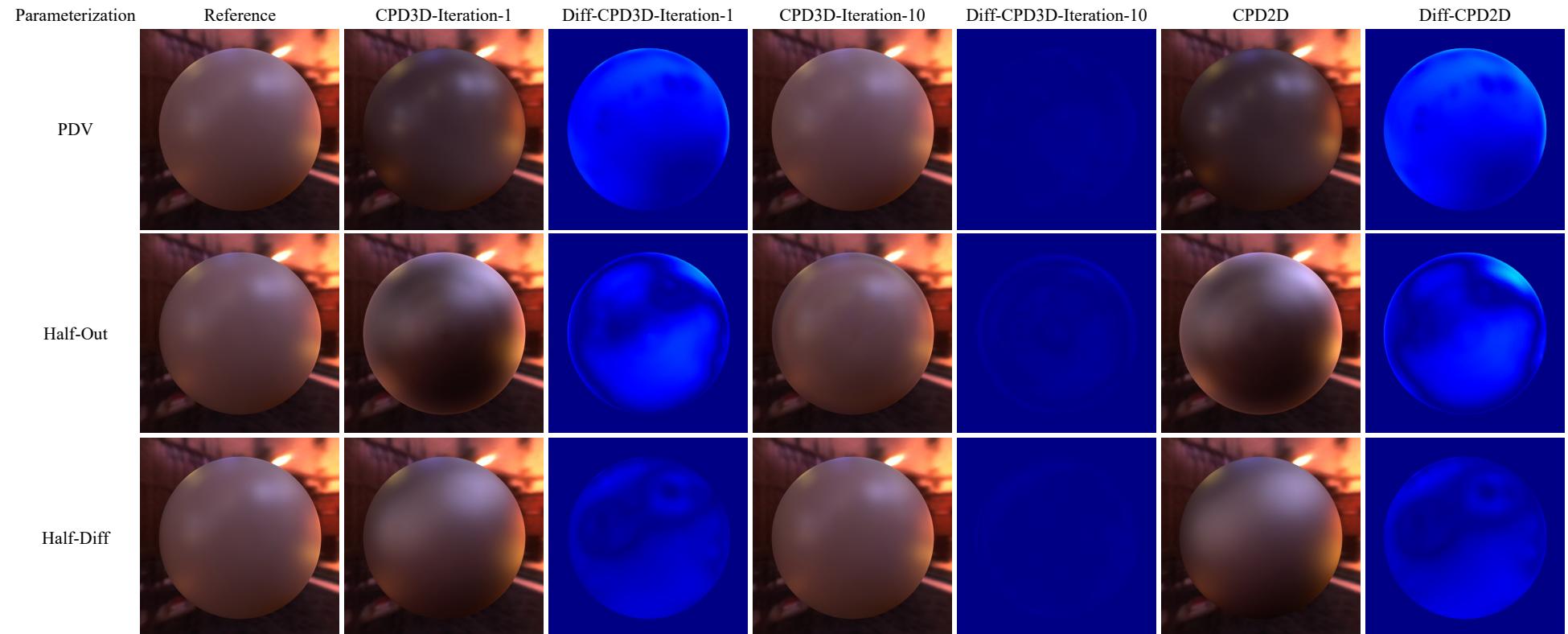
orange-paint



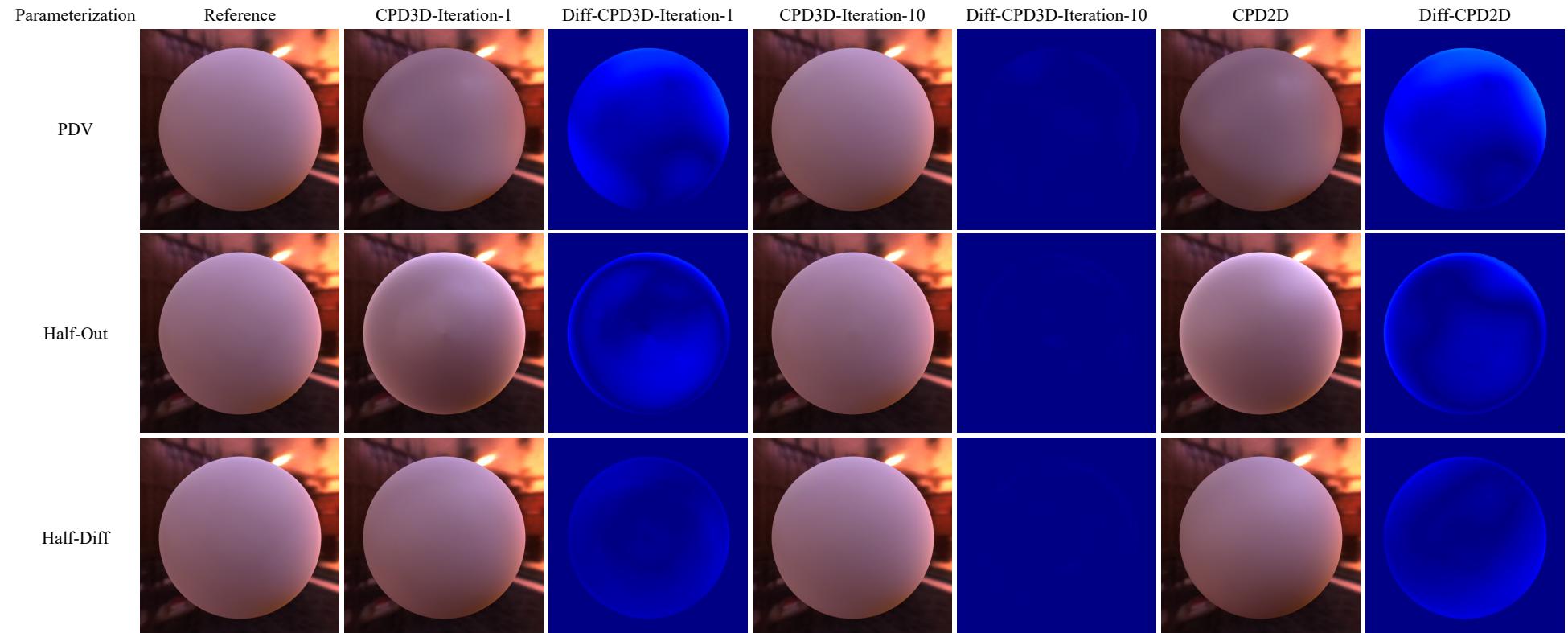
pearl-paint



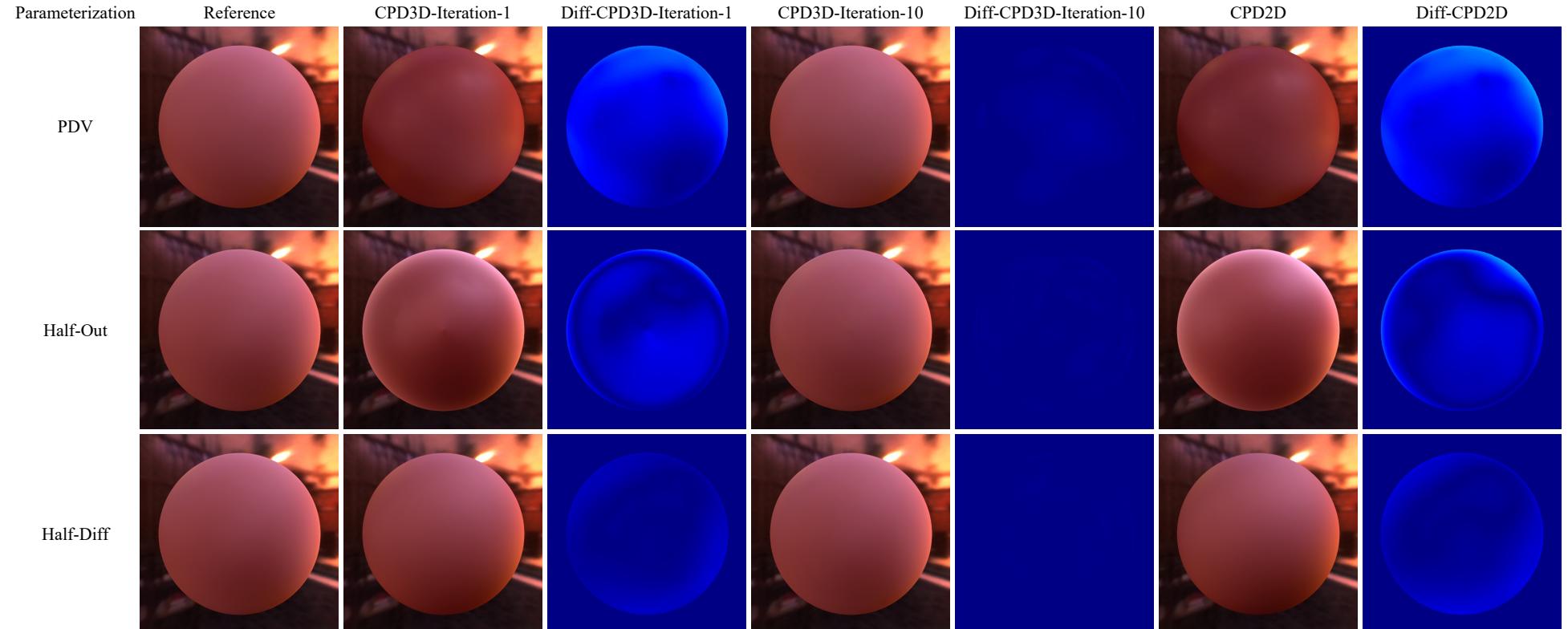
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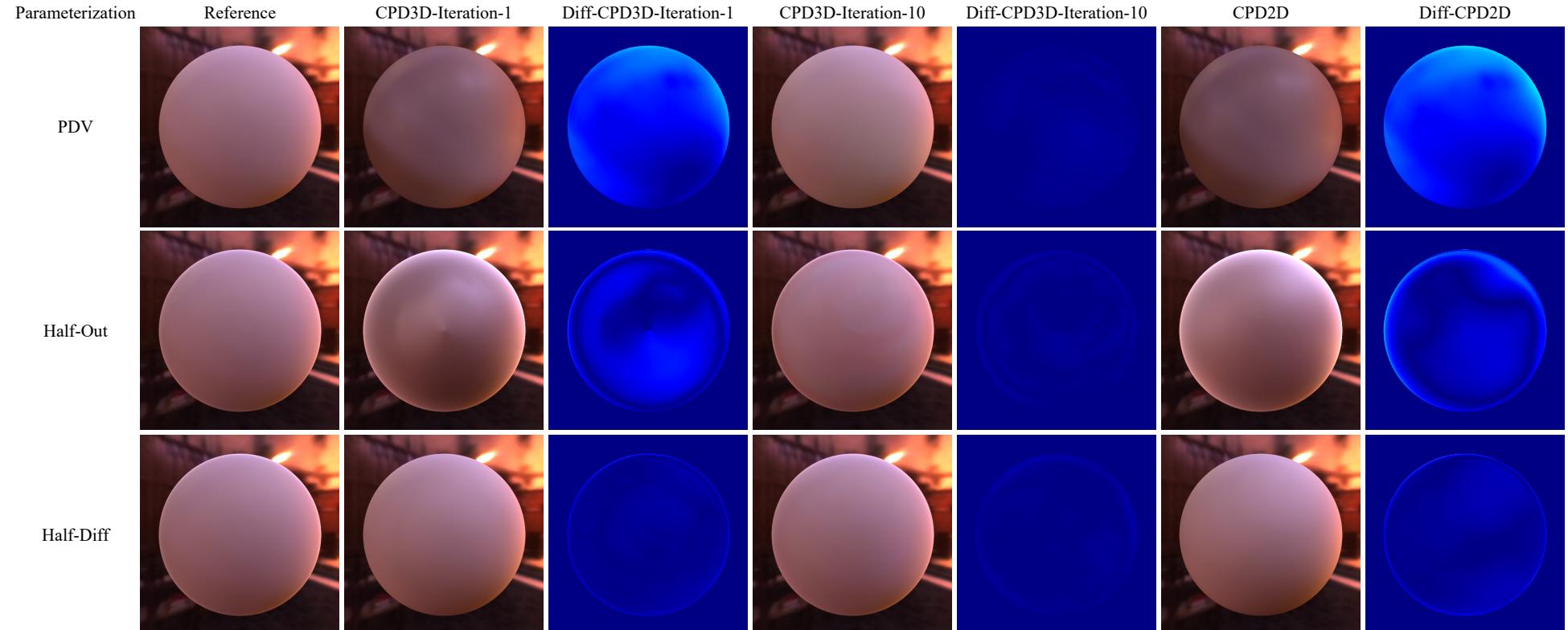
pink-fabric



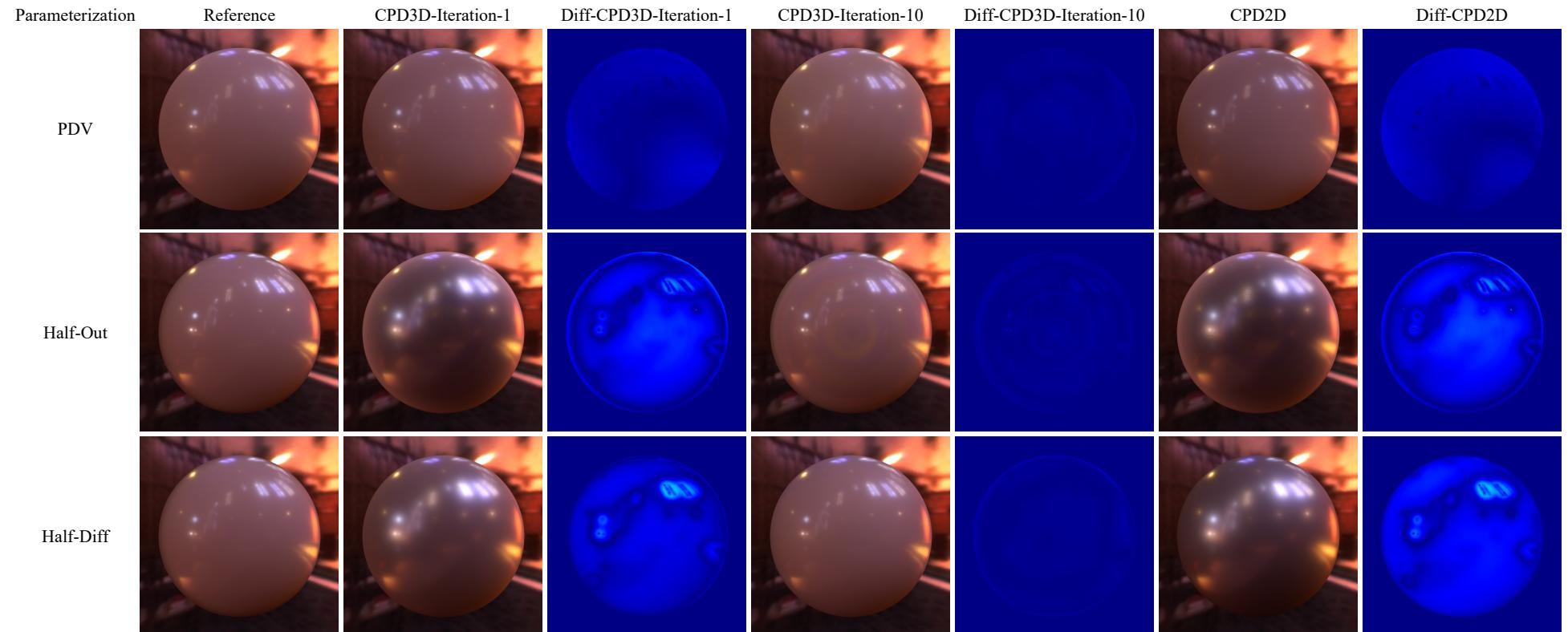
pink-fabric2



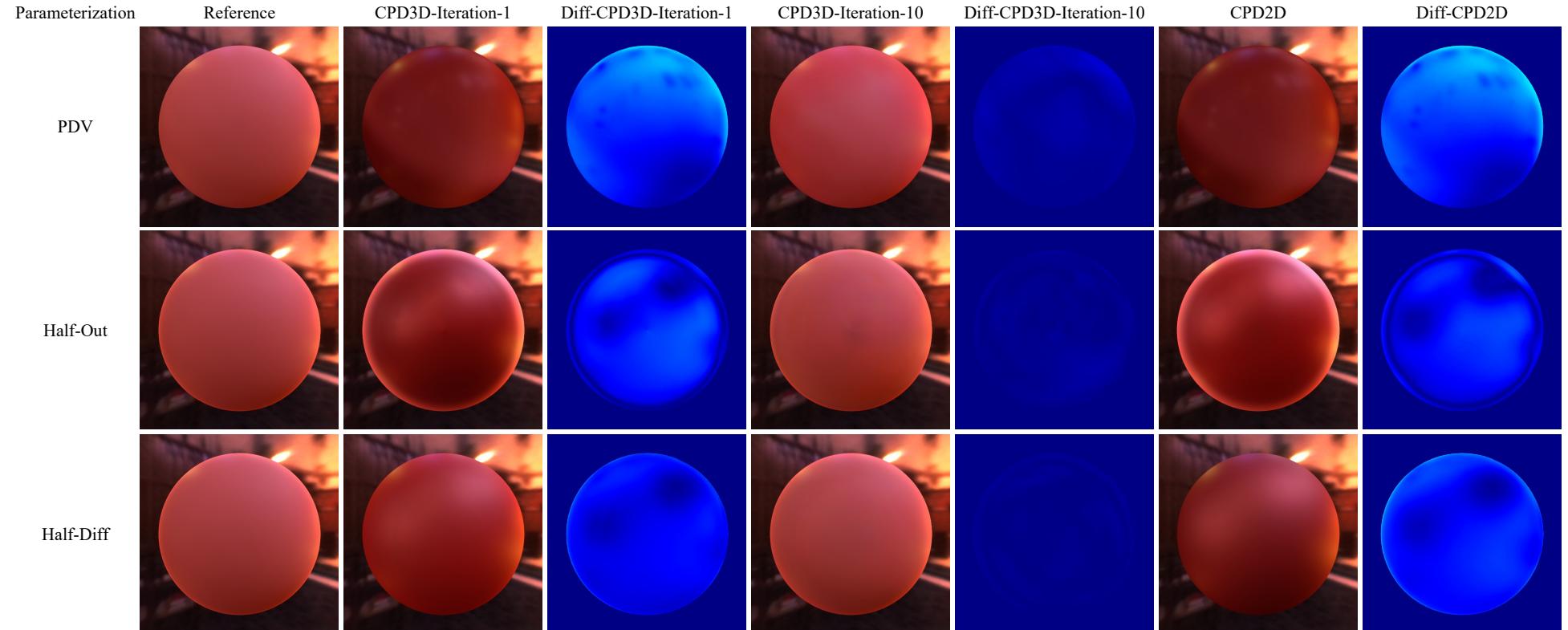
pink-felt



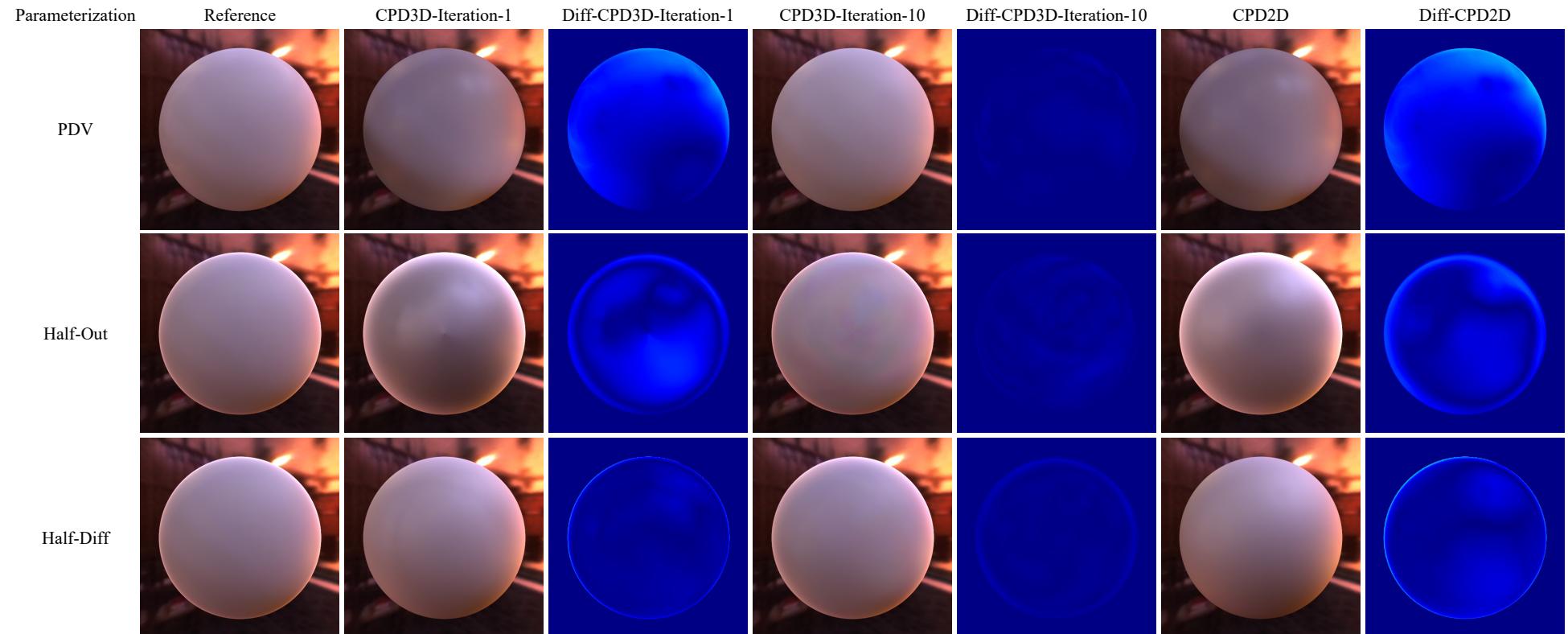
pink-jasper



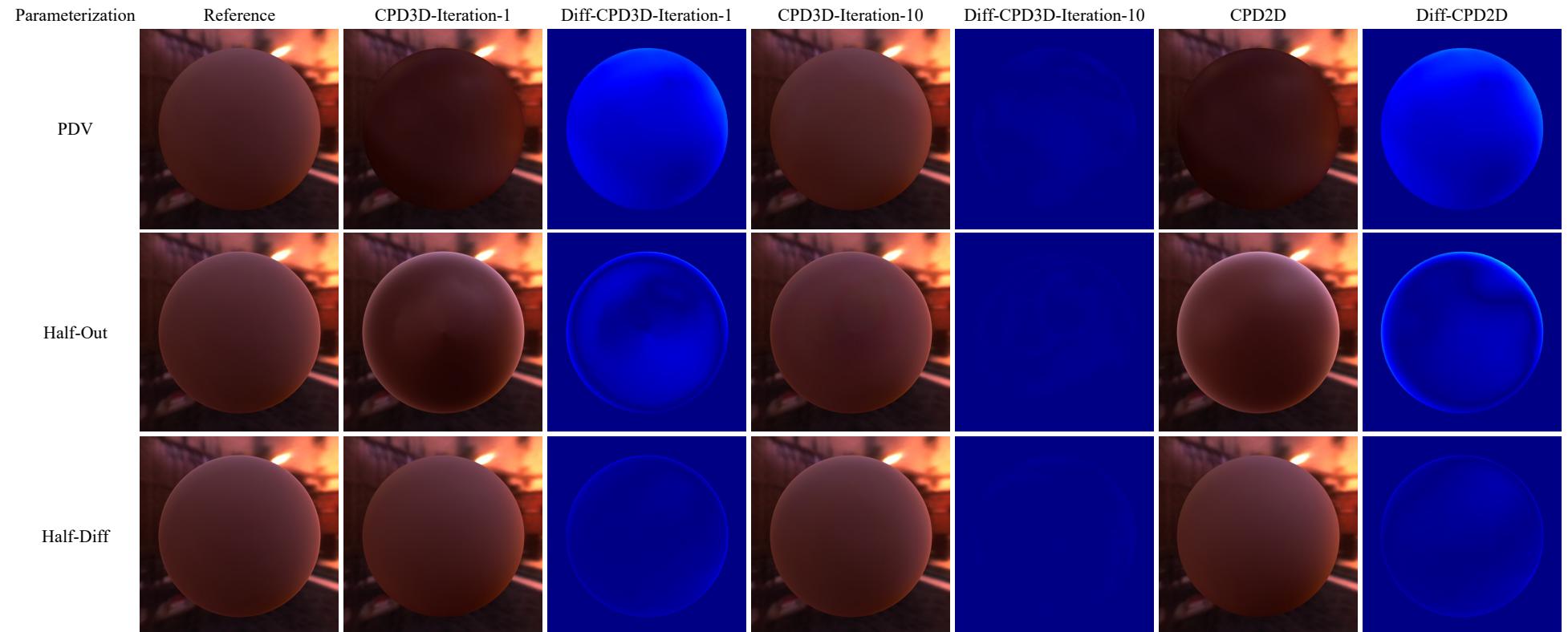
pink-plastic



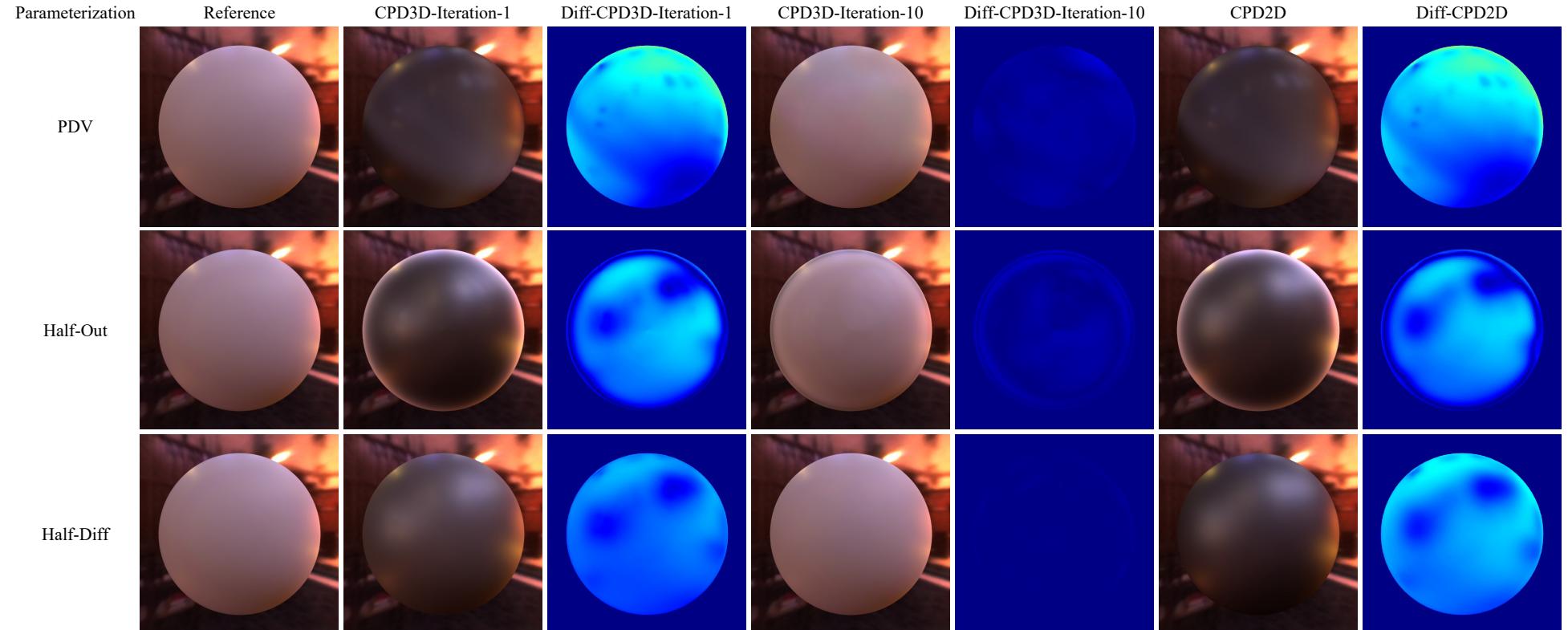
polyethylene



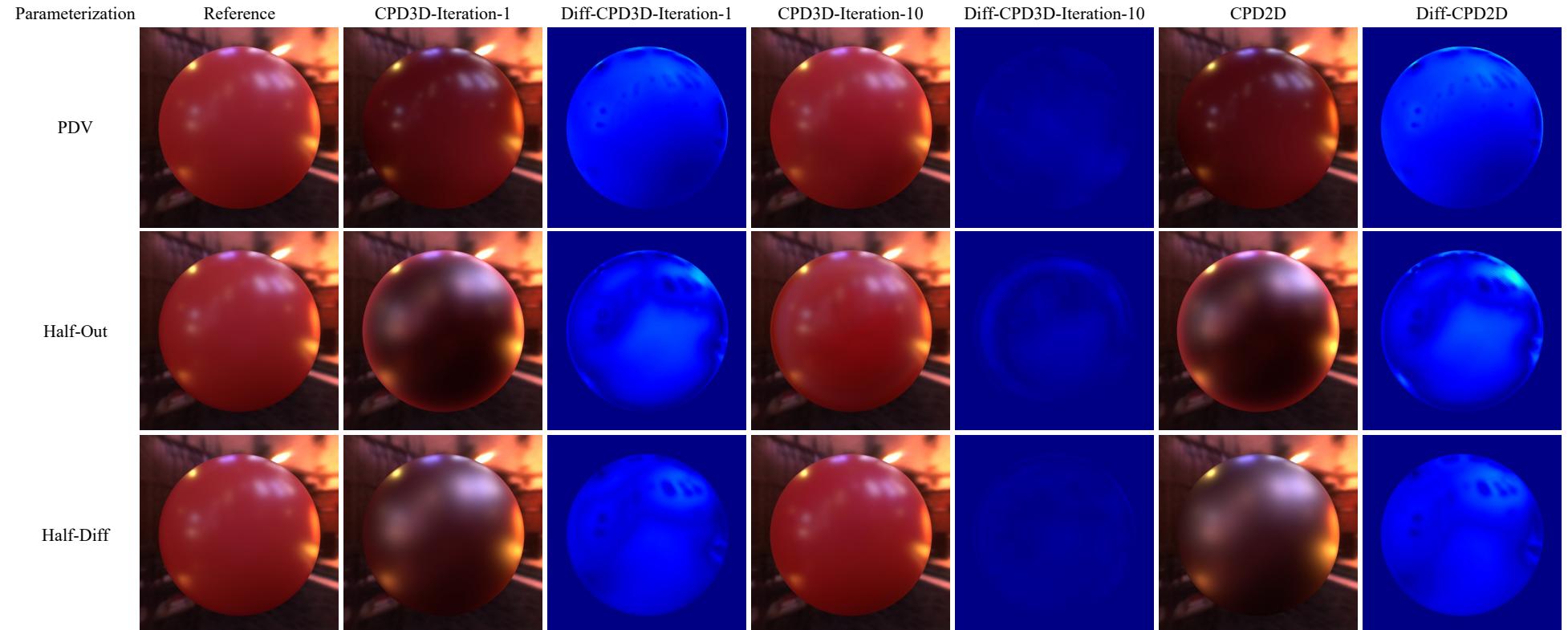
polyurethane-foam

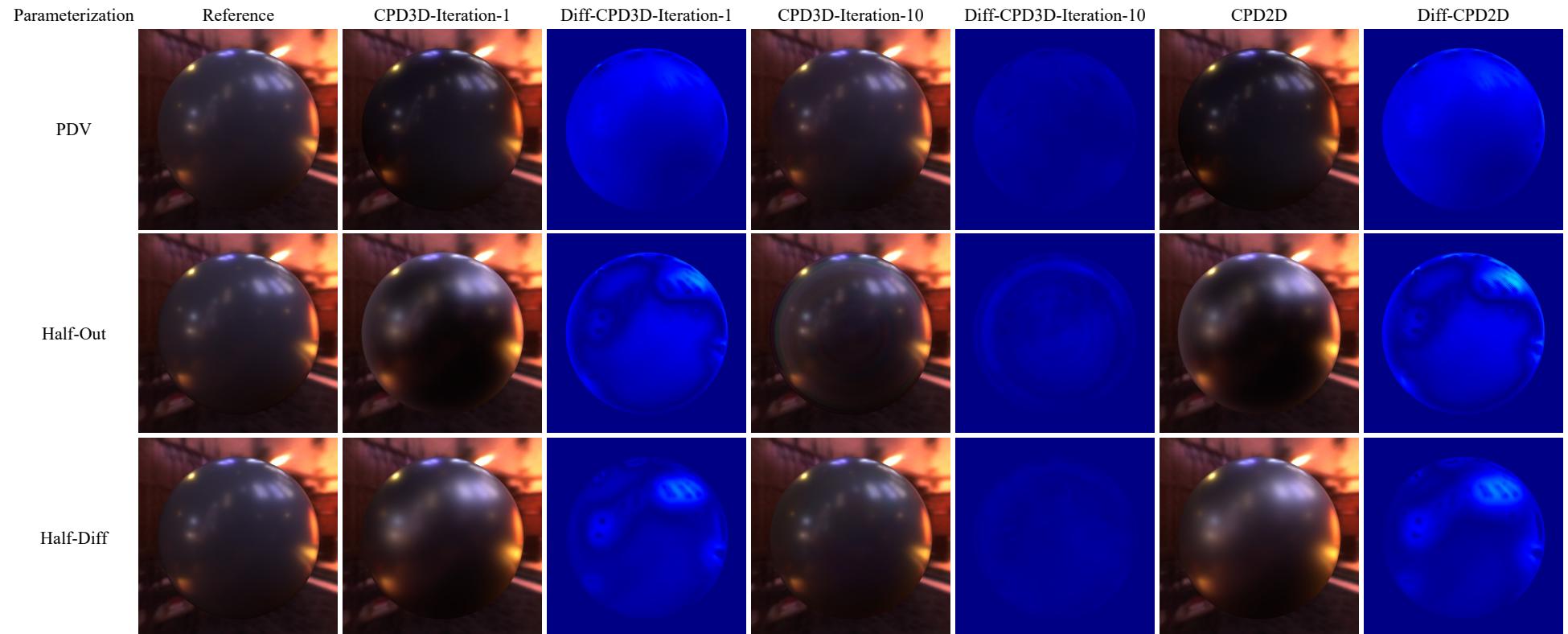


pure-rubber

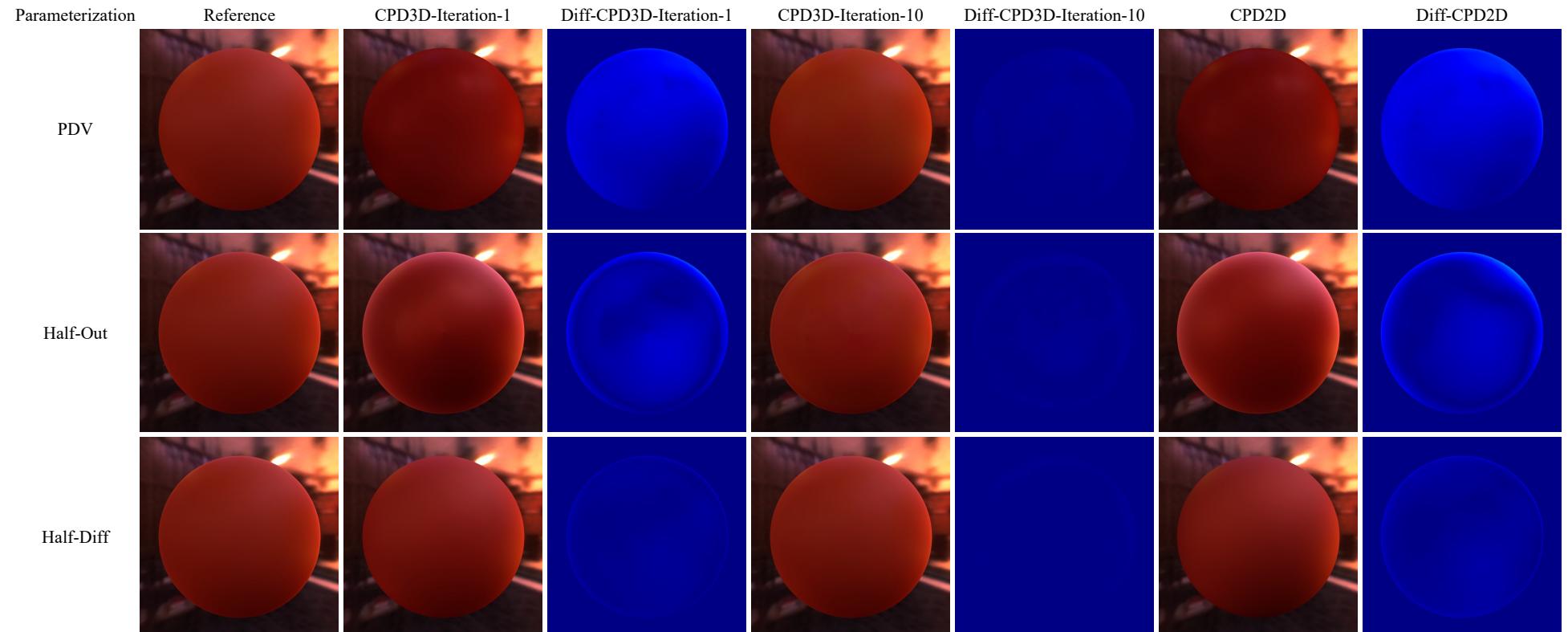


purple-paint

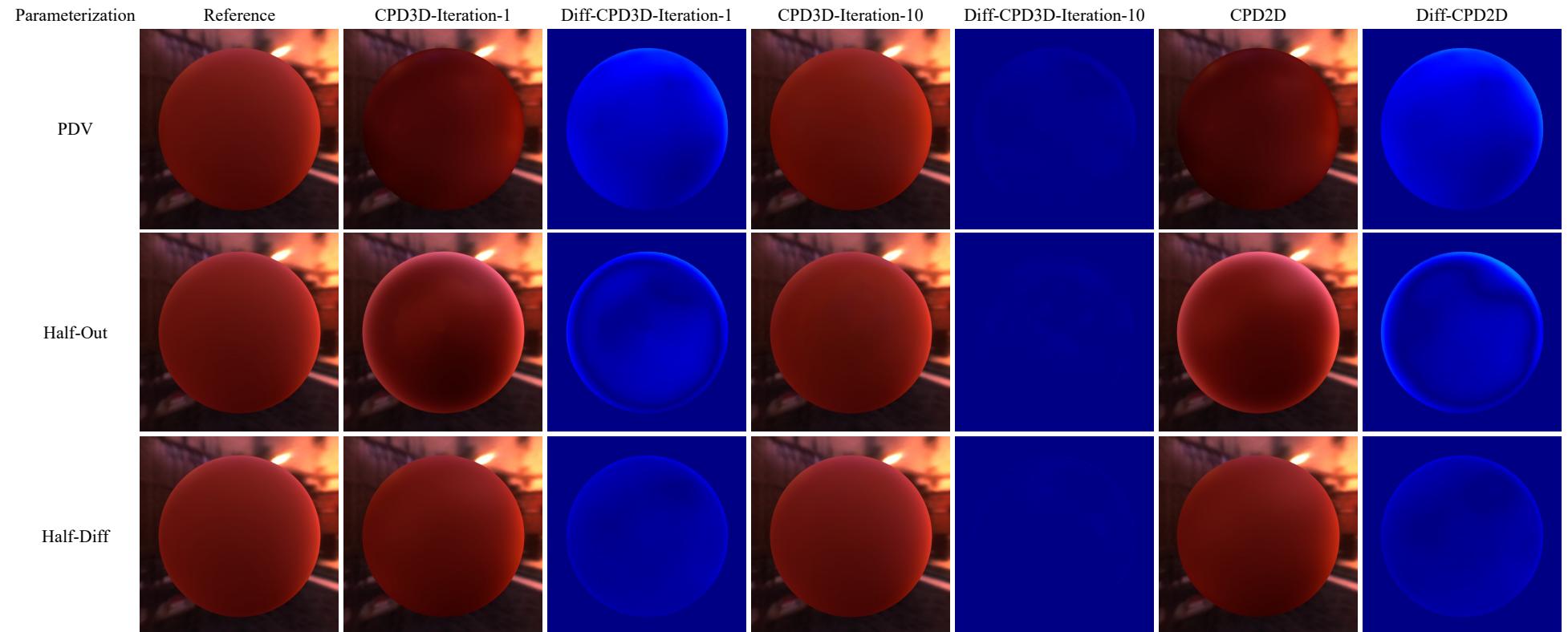


pvc

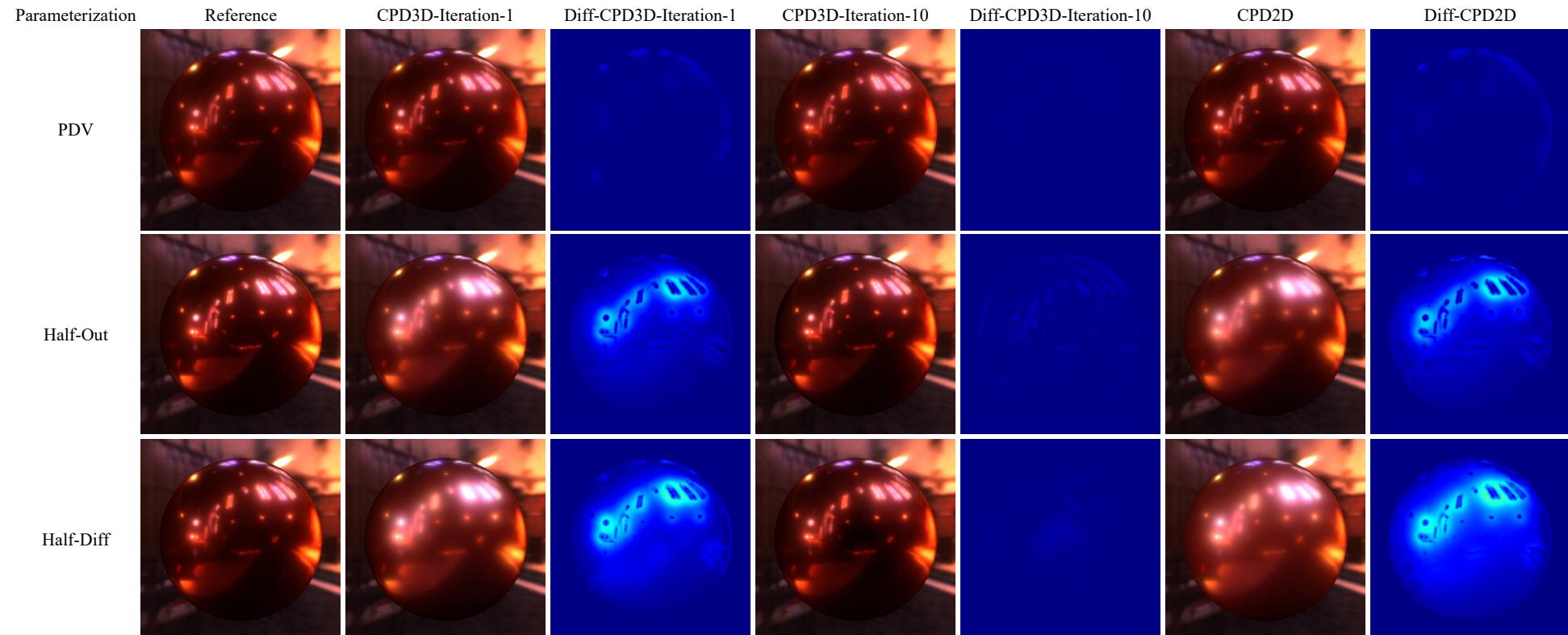
red-fabric



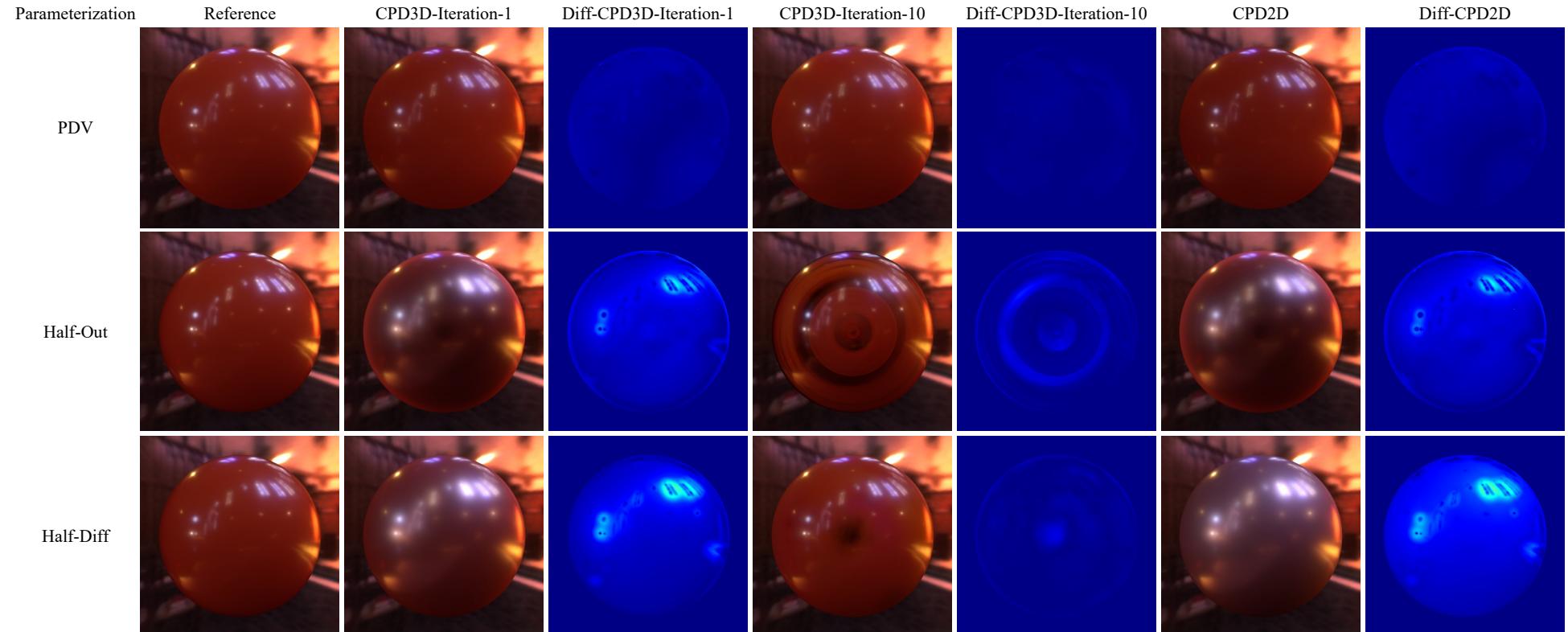
red-fabric2



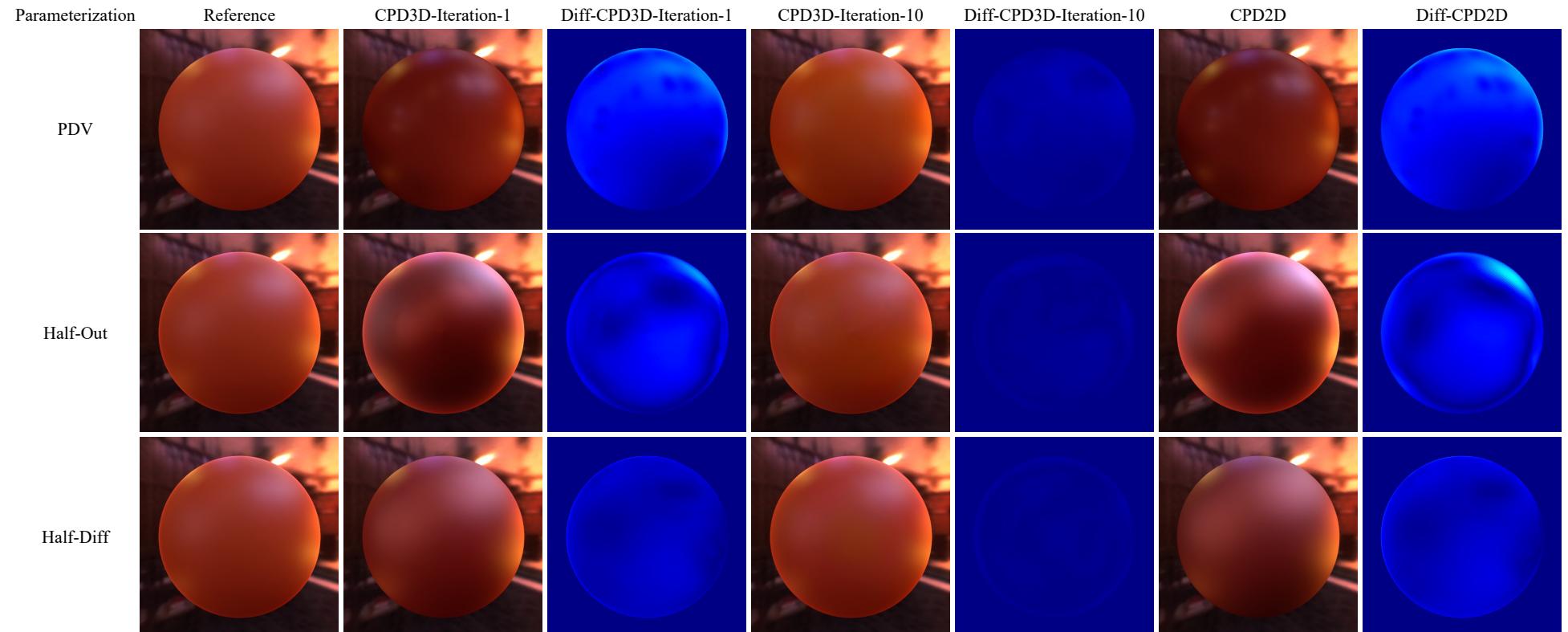
red-metallic-paint



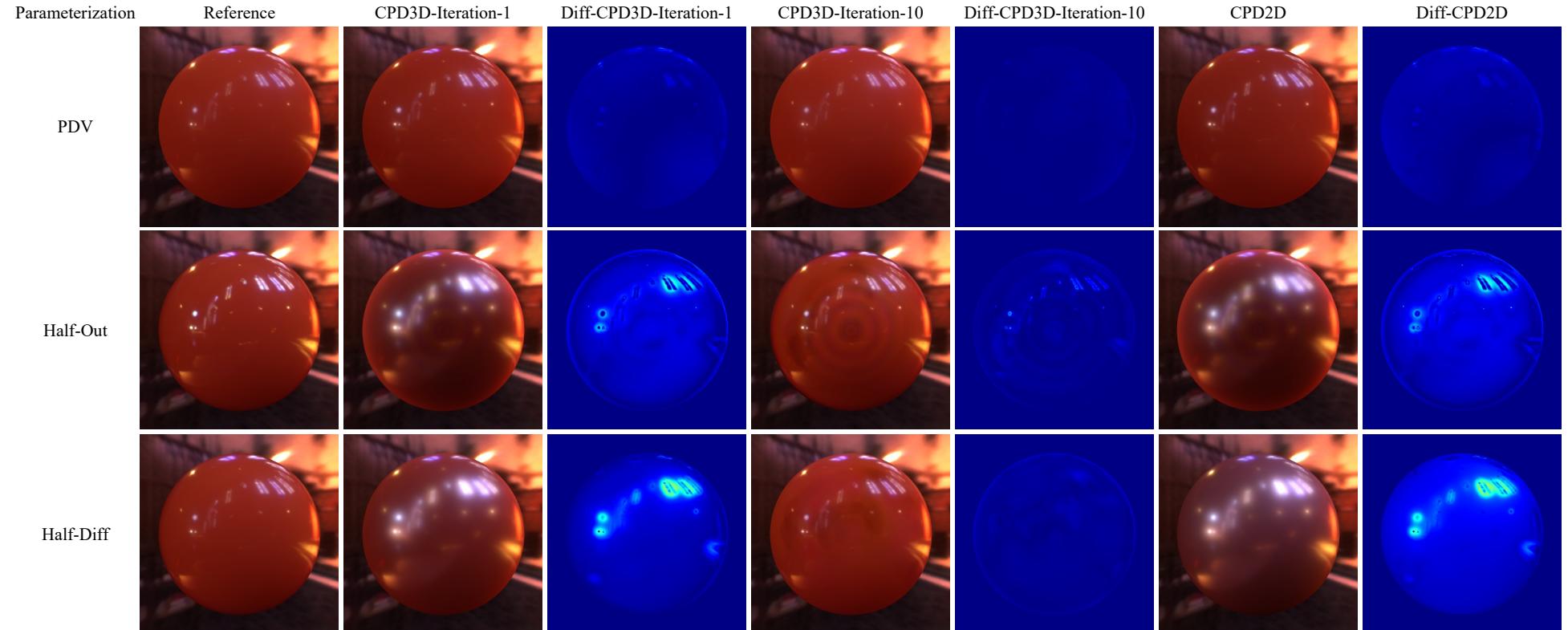
red-phenolic



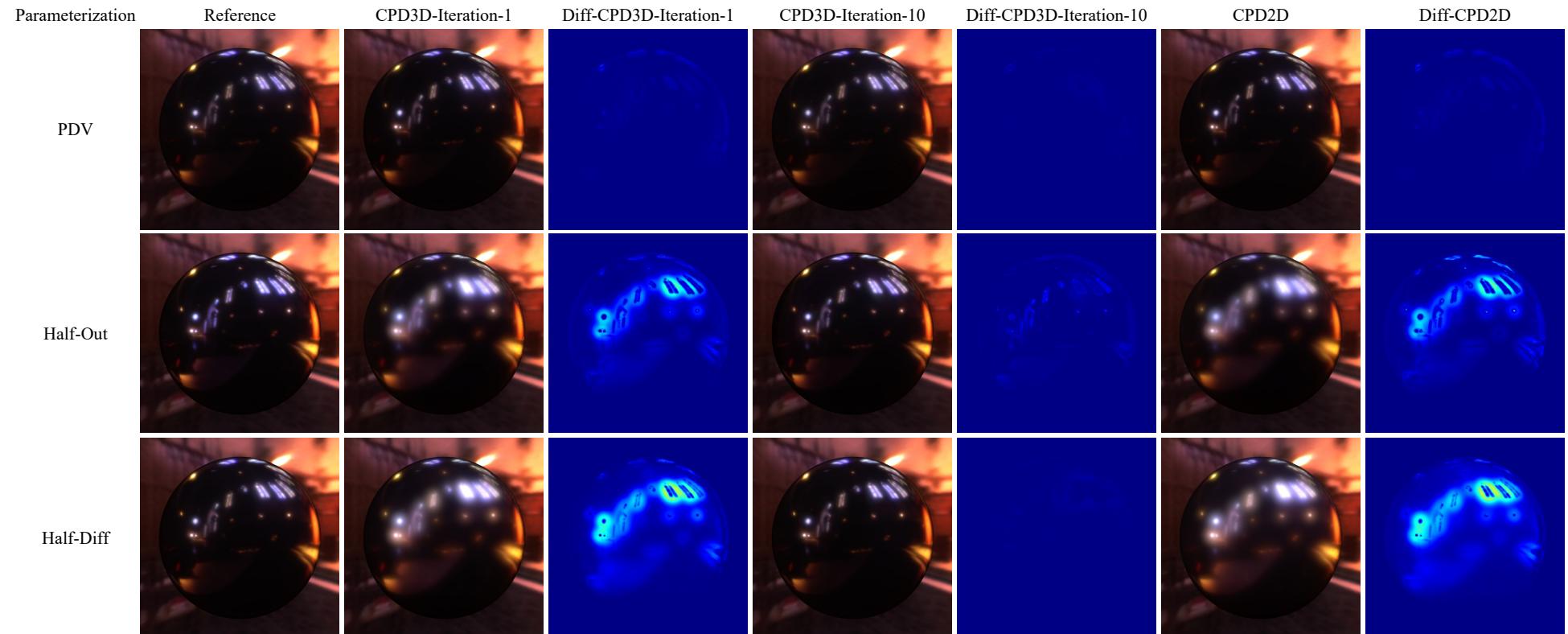
red-plastic



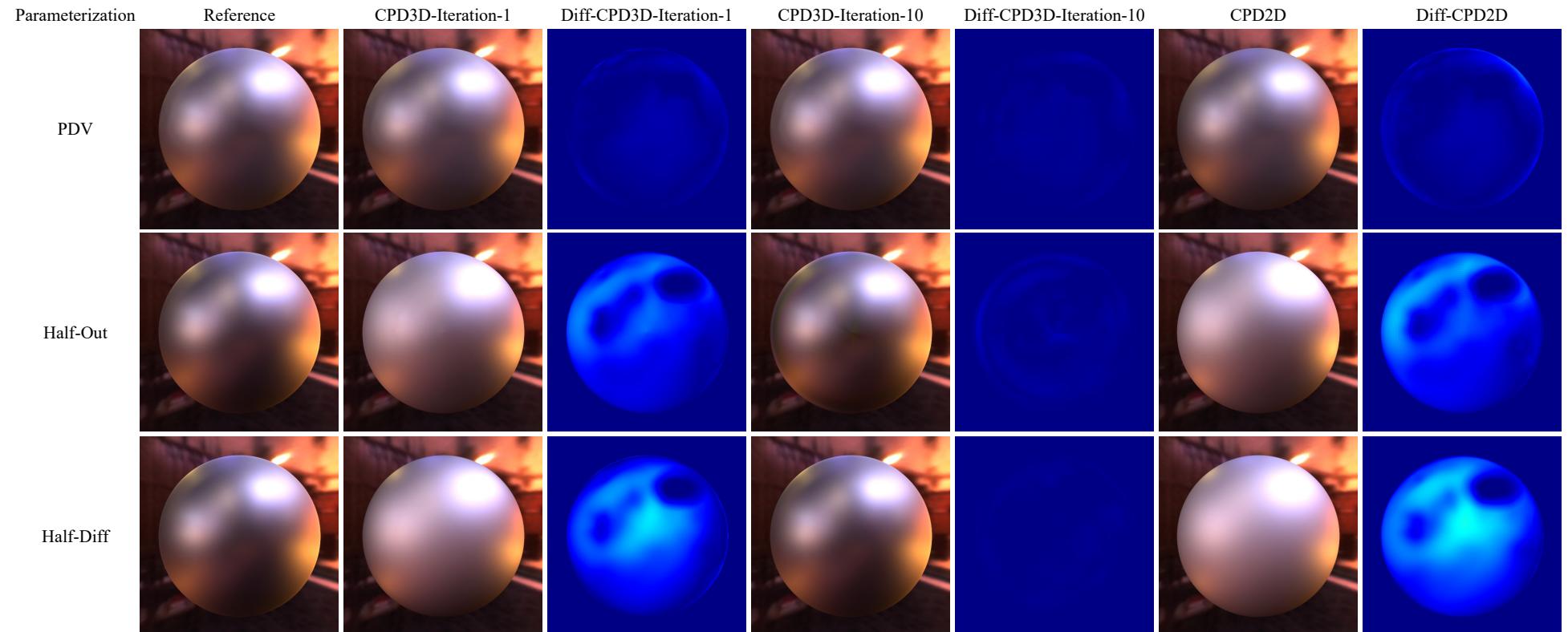
red-specular-plastic



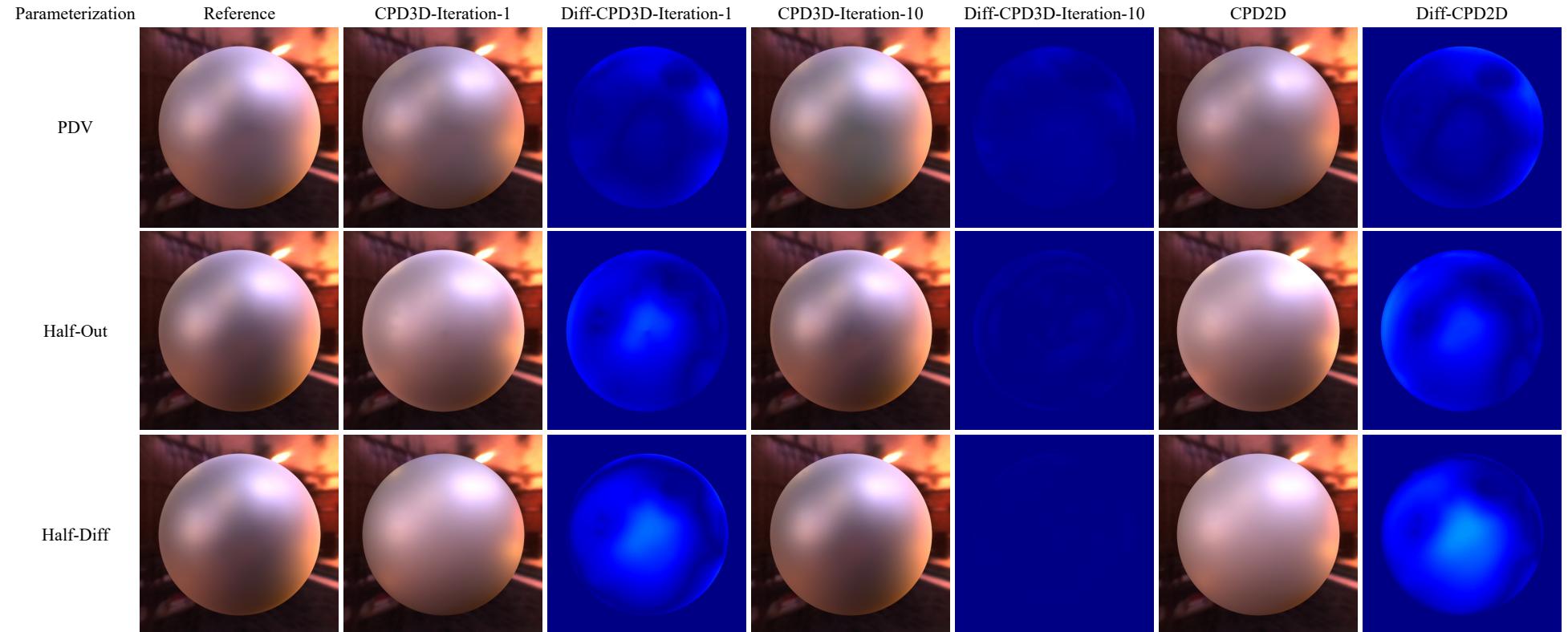
silicon-nitrate



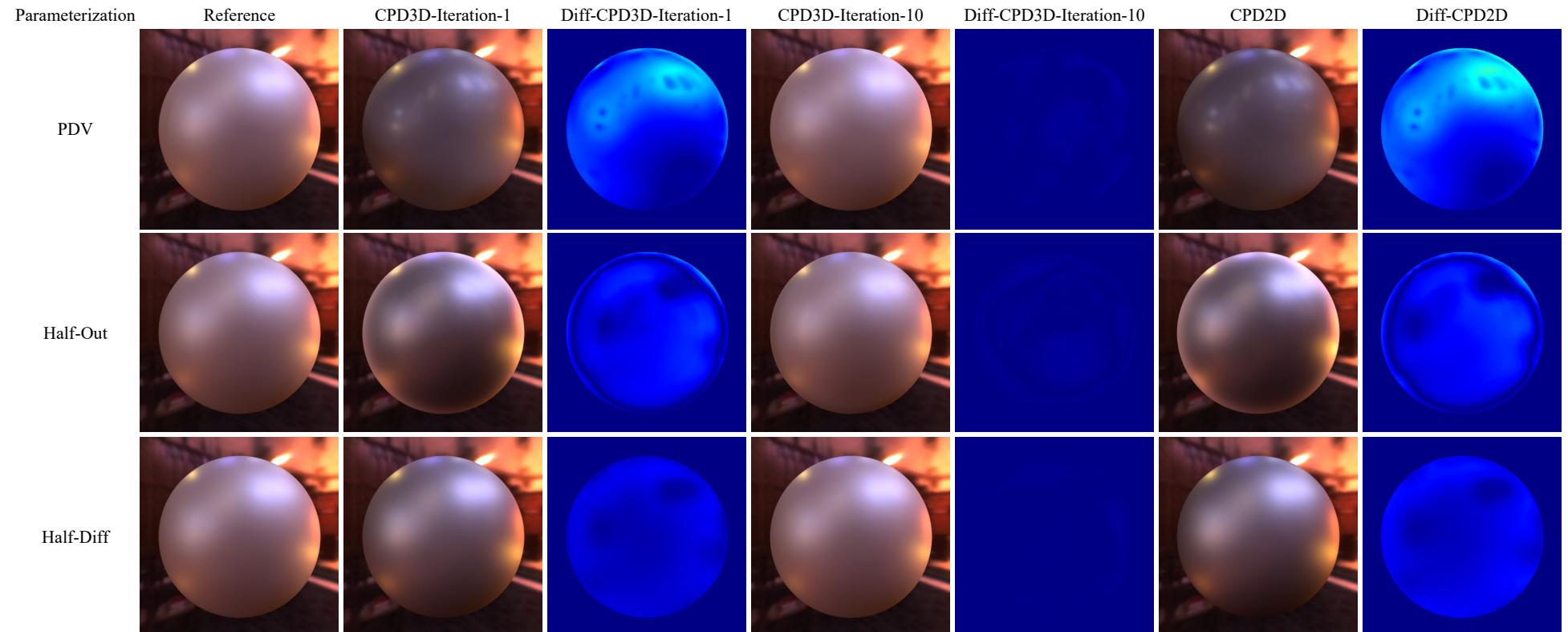
silver-metallic-paint



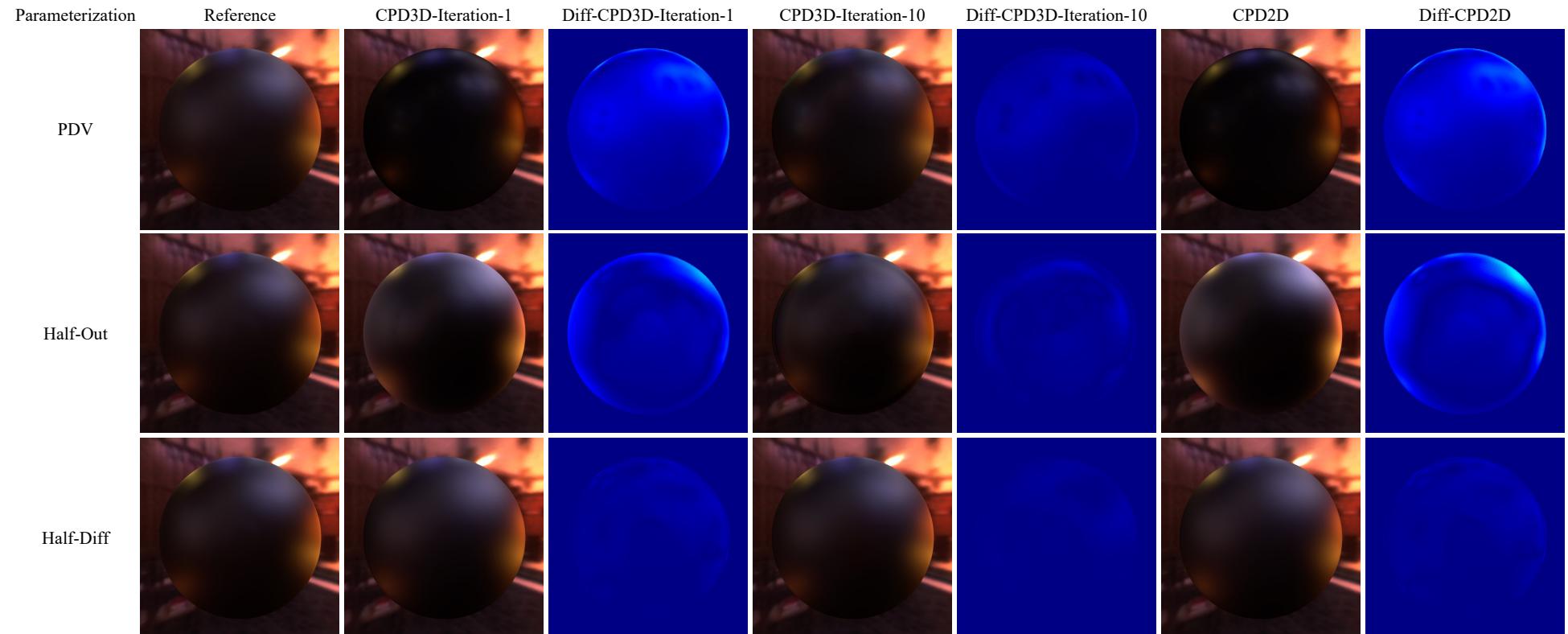
silver-metallic-paint2



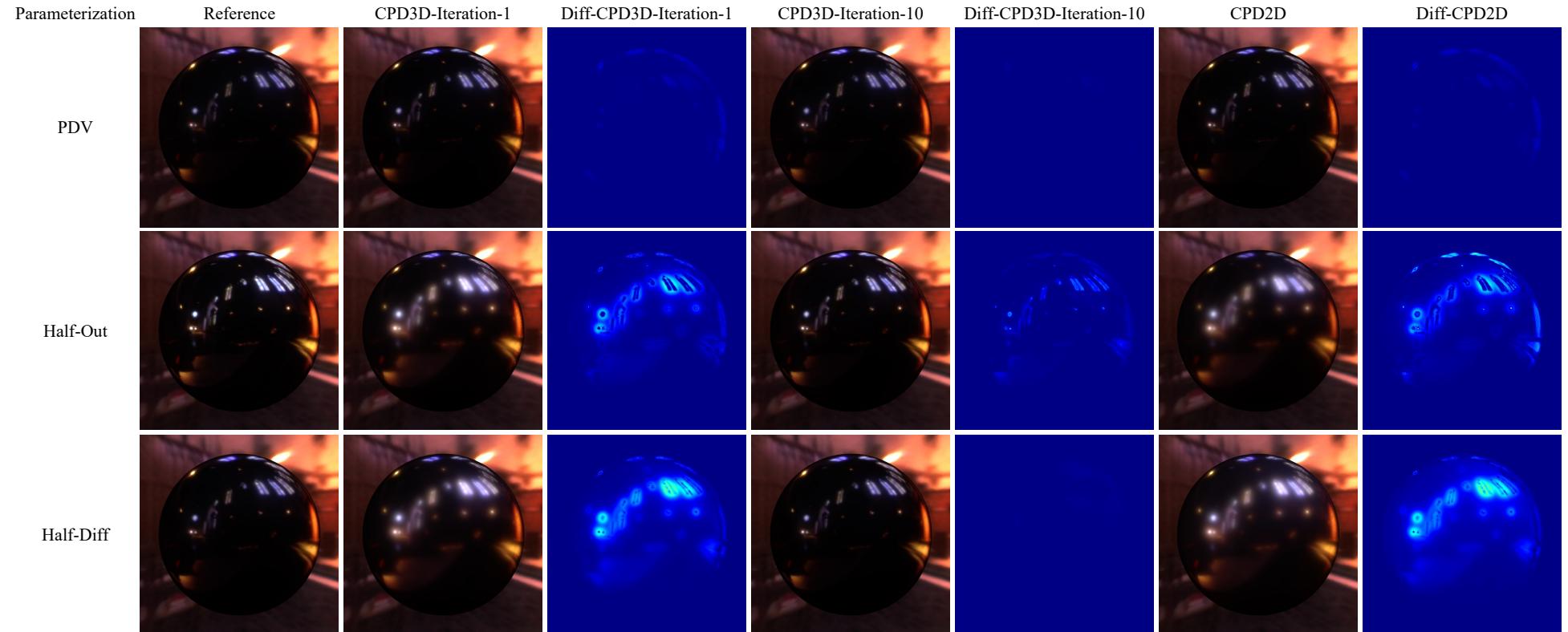
silver-paint



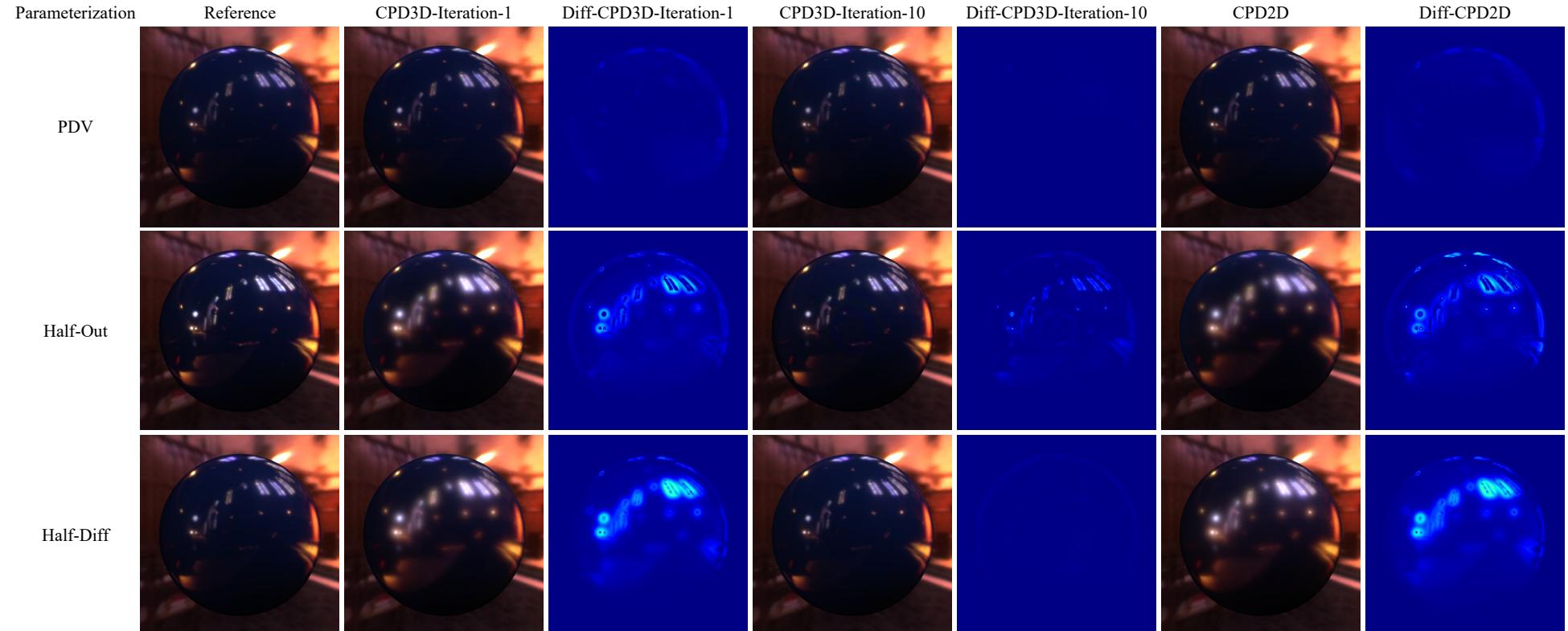
special-walnut-224



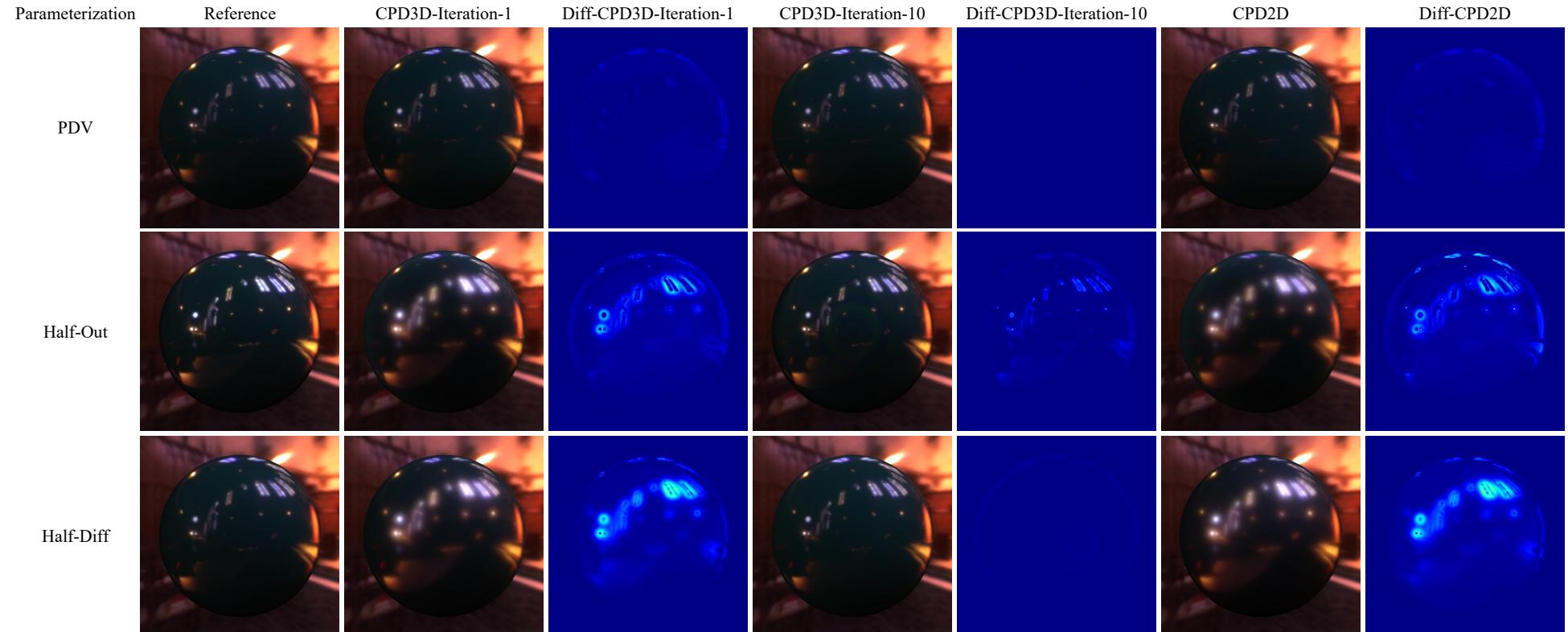
specular-black-phenolic



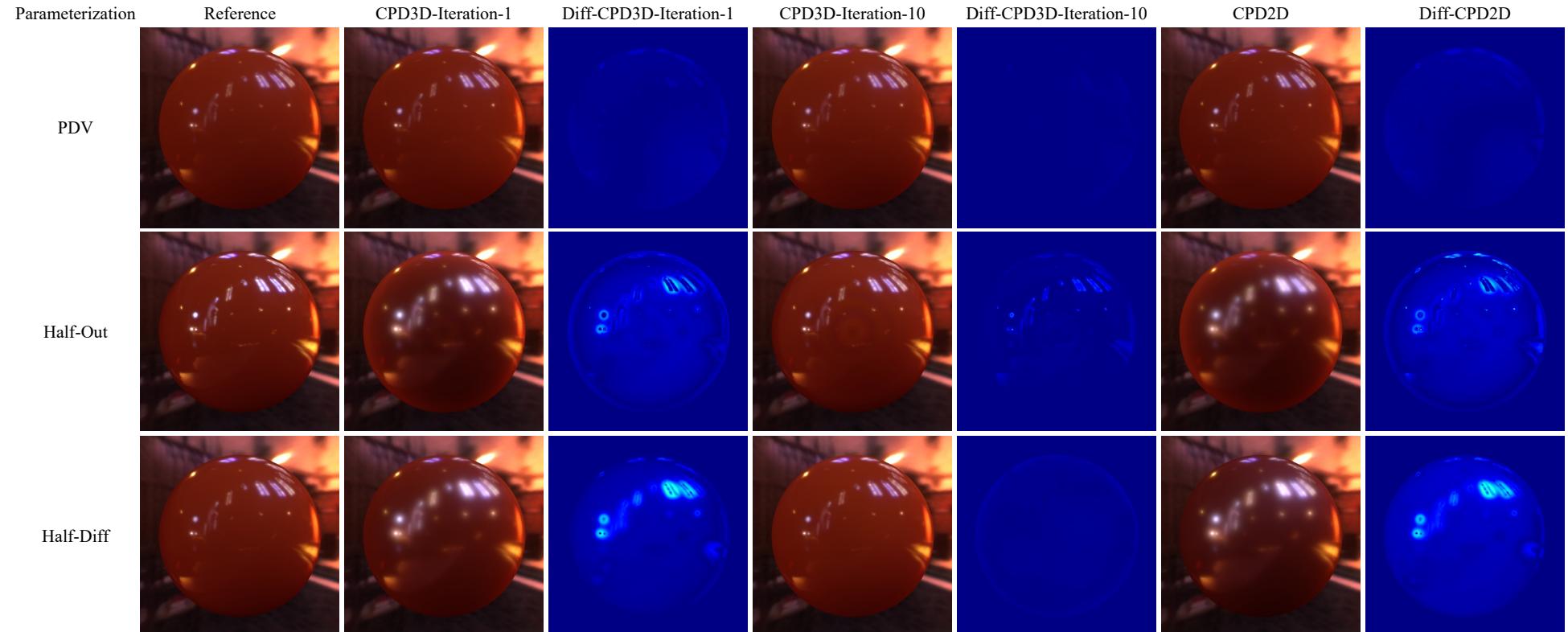
specular-blue-phenolic



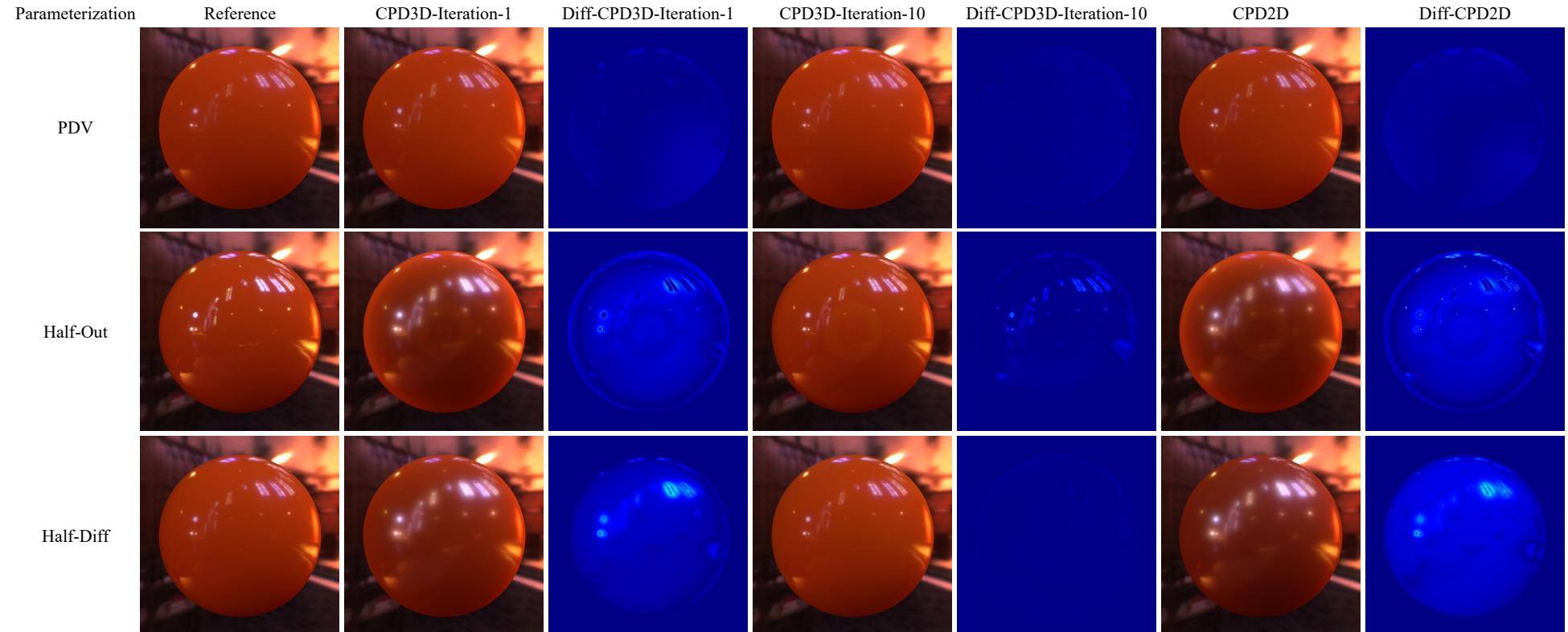
specular-green-phenolic



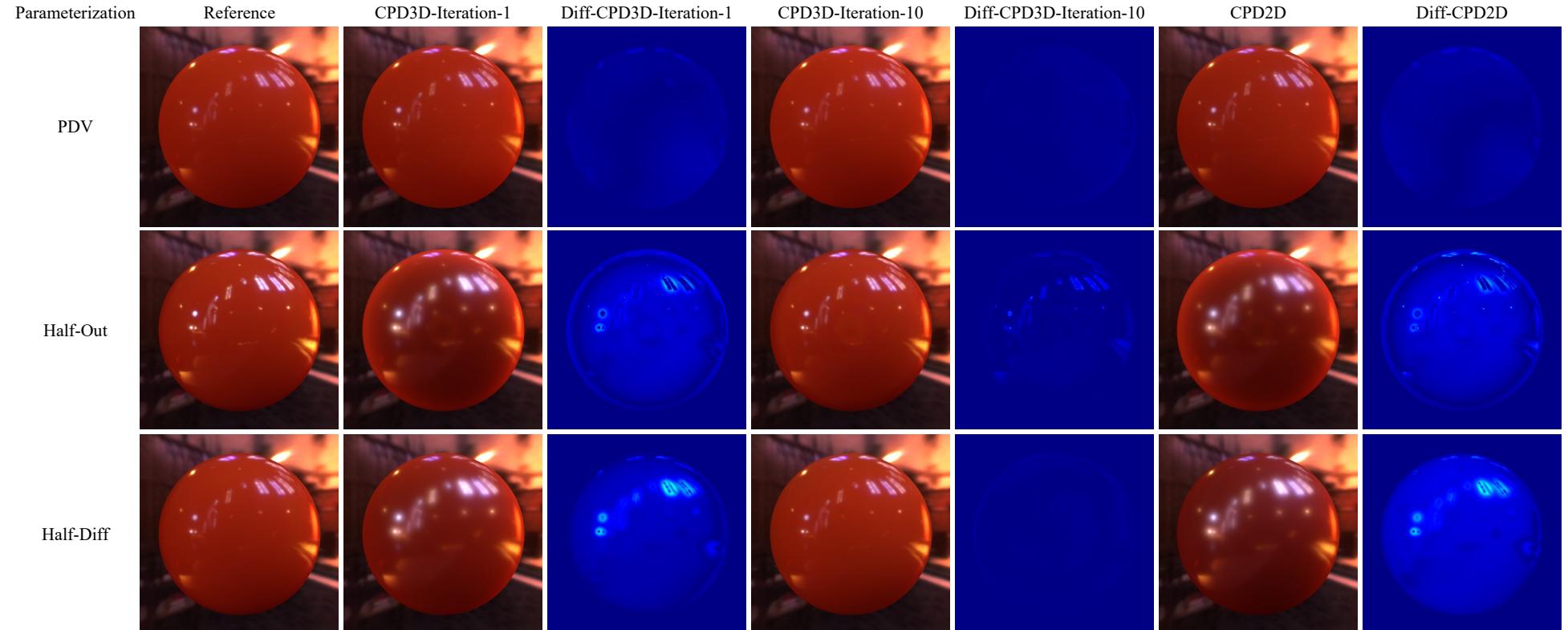
specular-maroon-phenolic



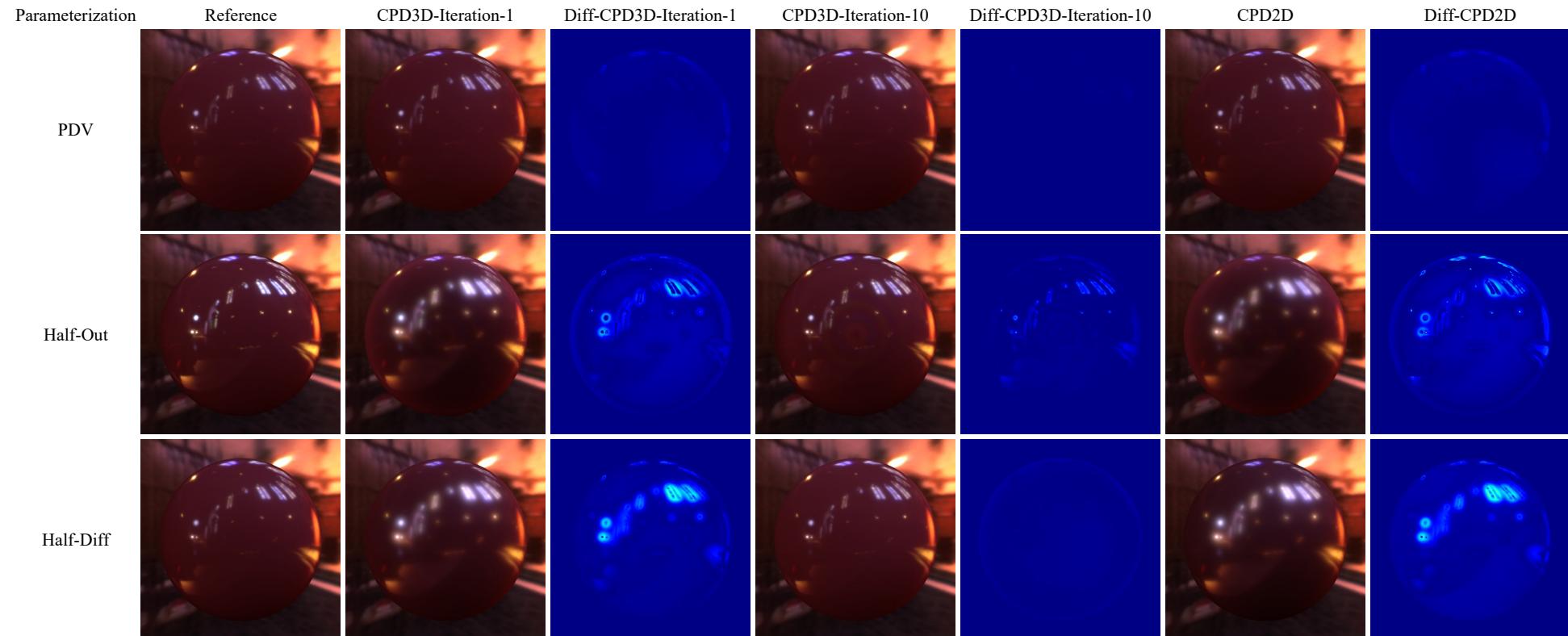
specular-orange-phenolic



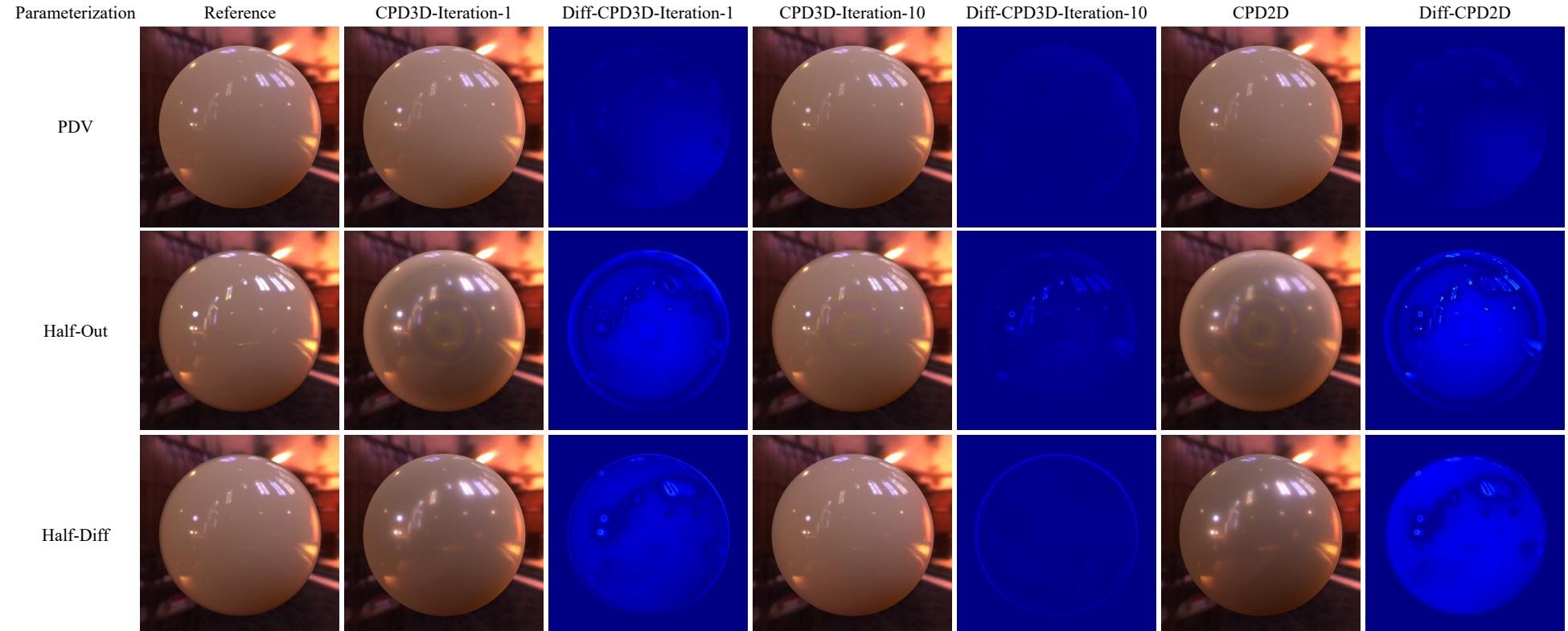
specular-red-phenolic



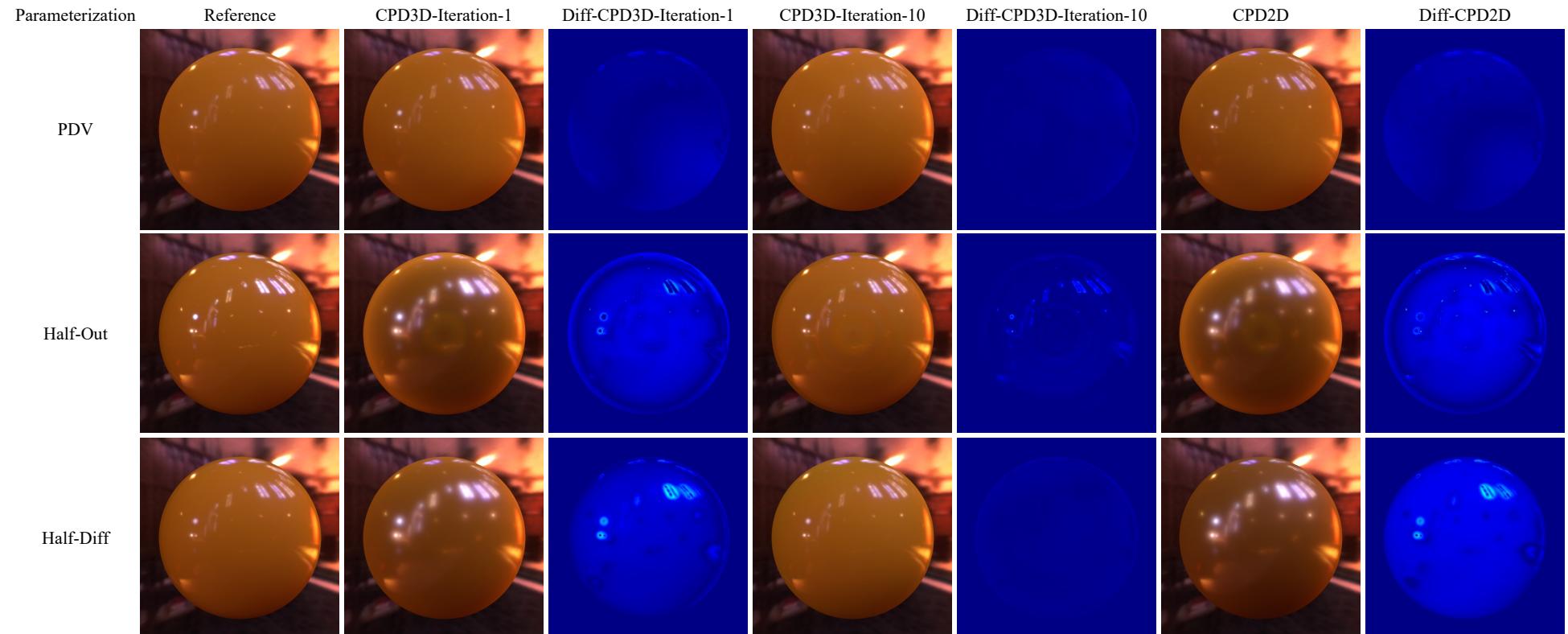
specular-violet-phenolic



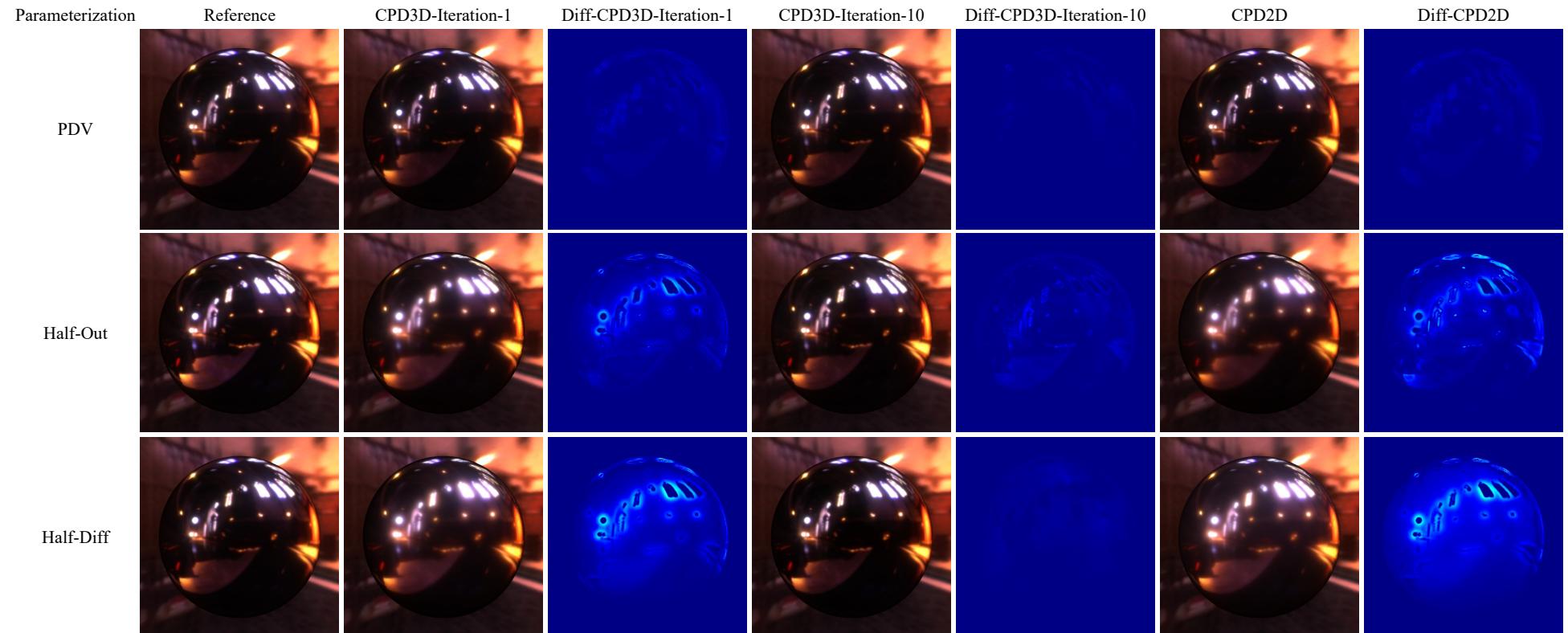
specular-white-phenolic

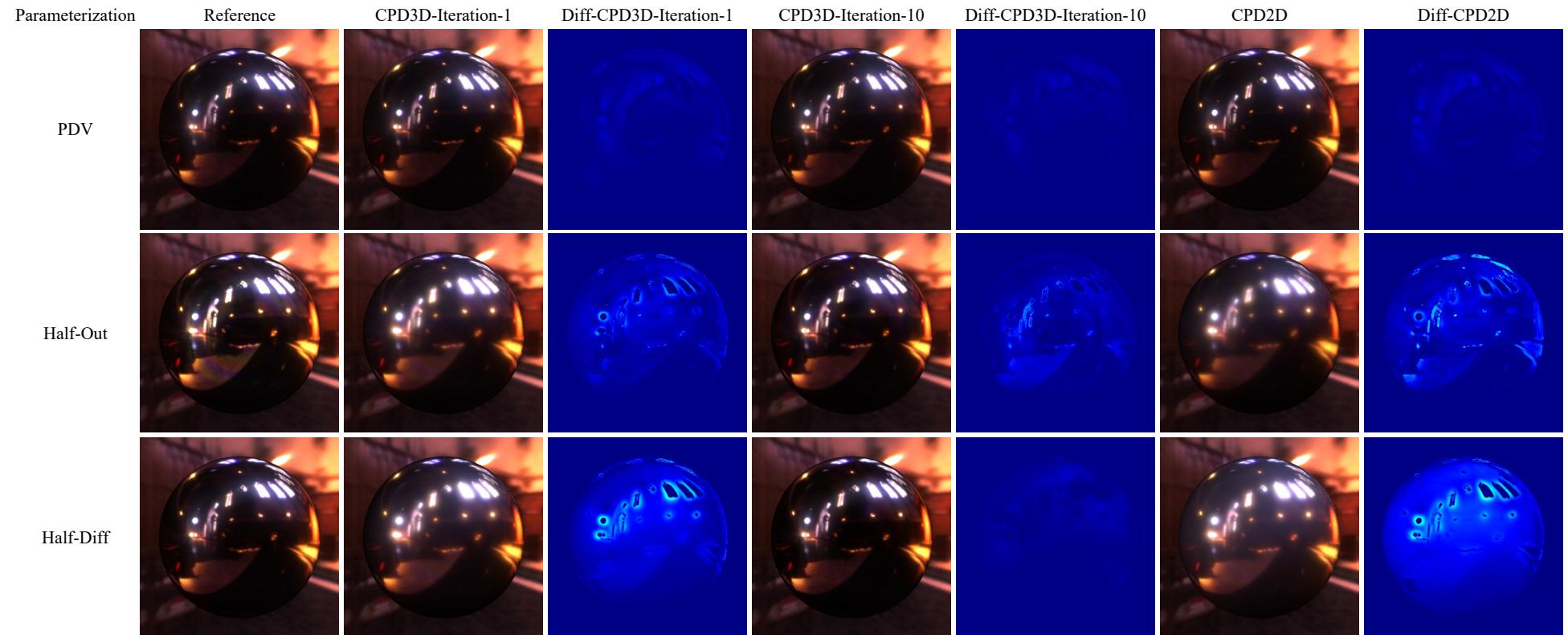


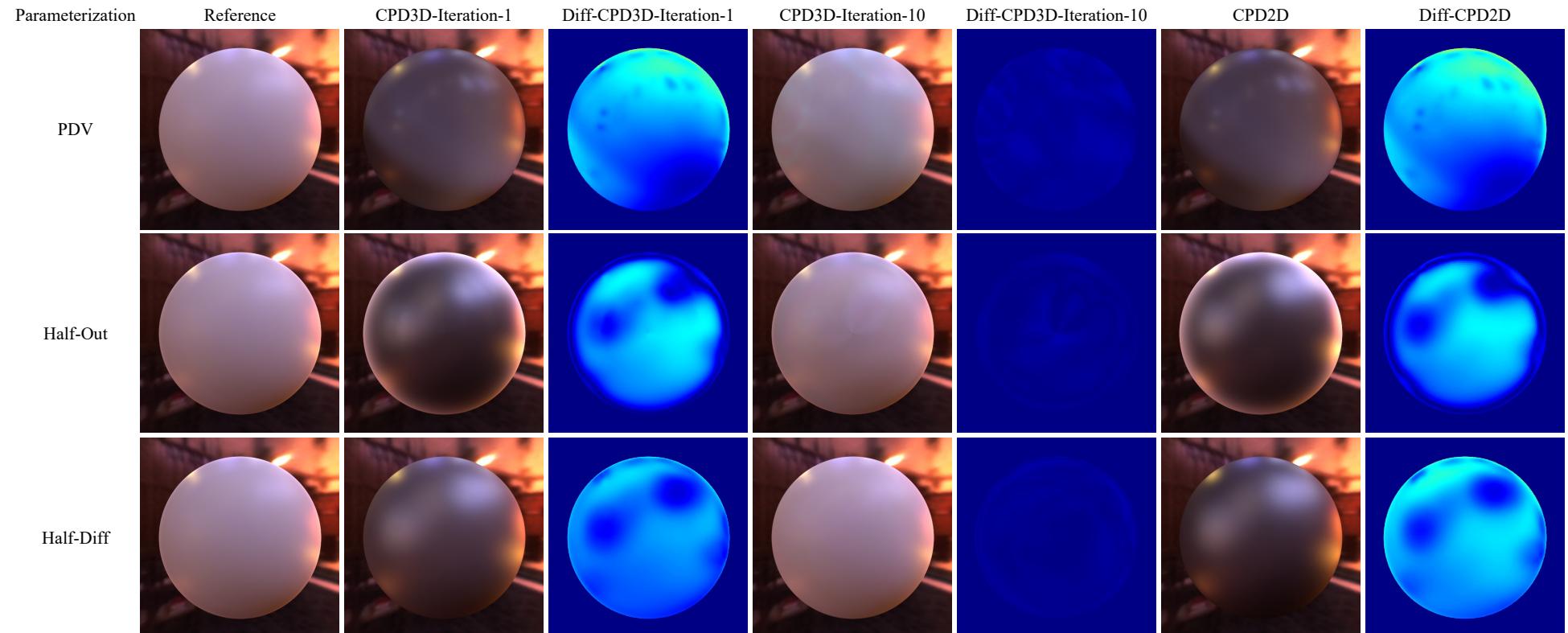
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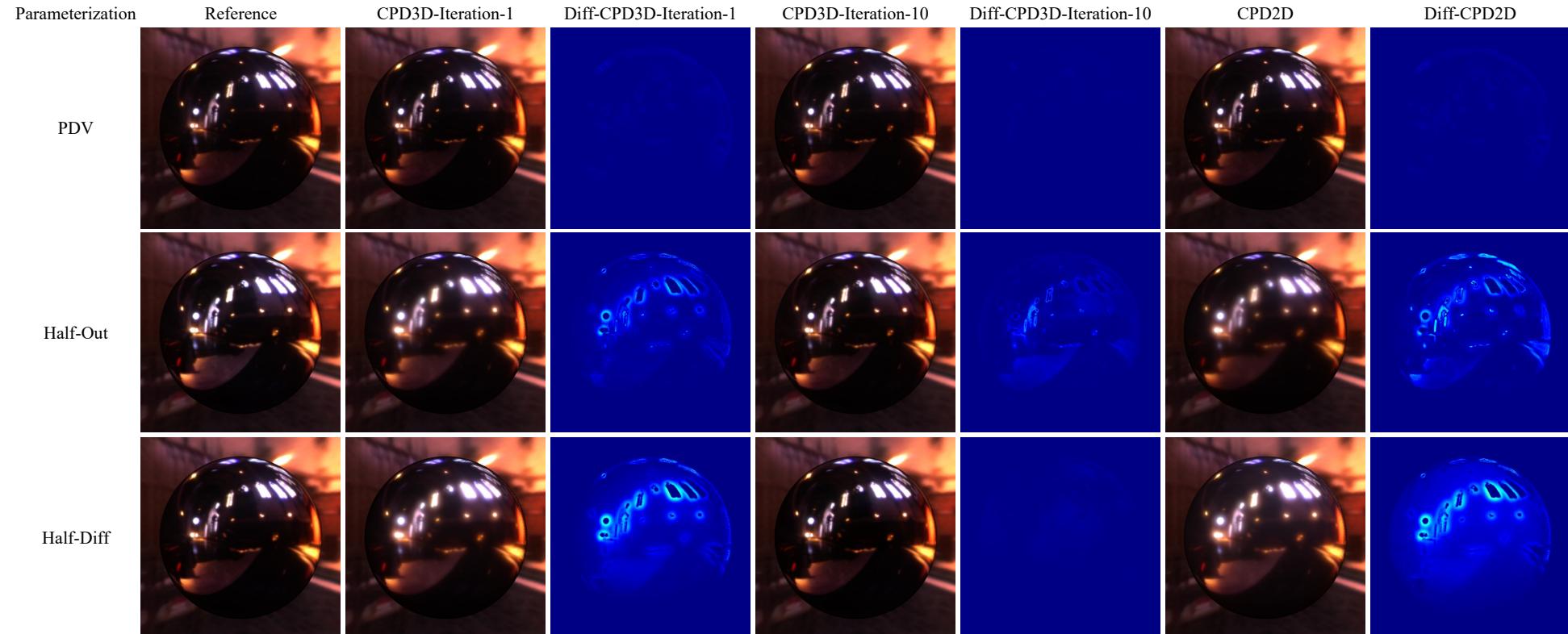
ss440



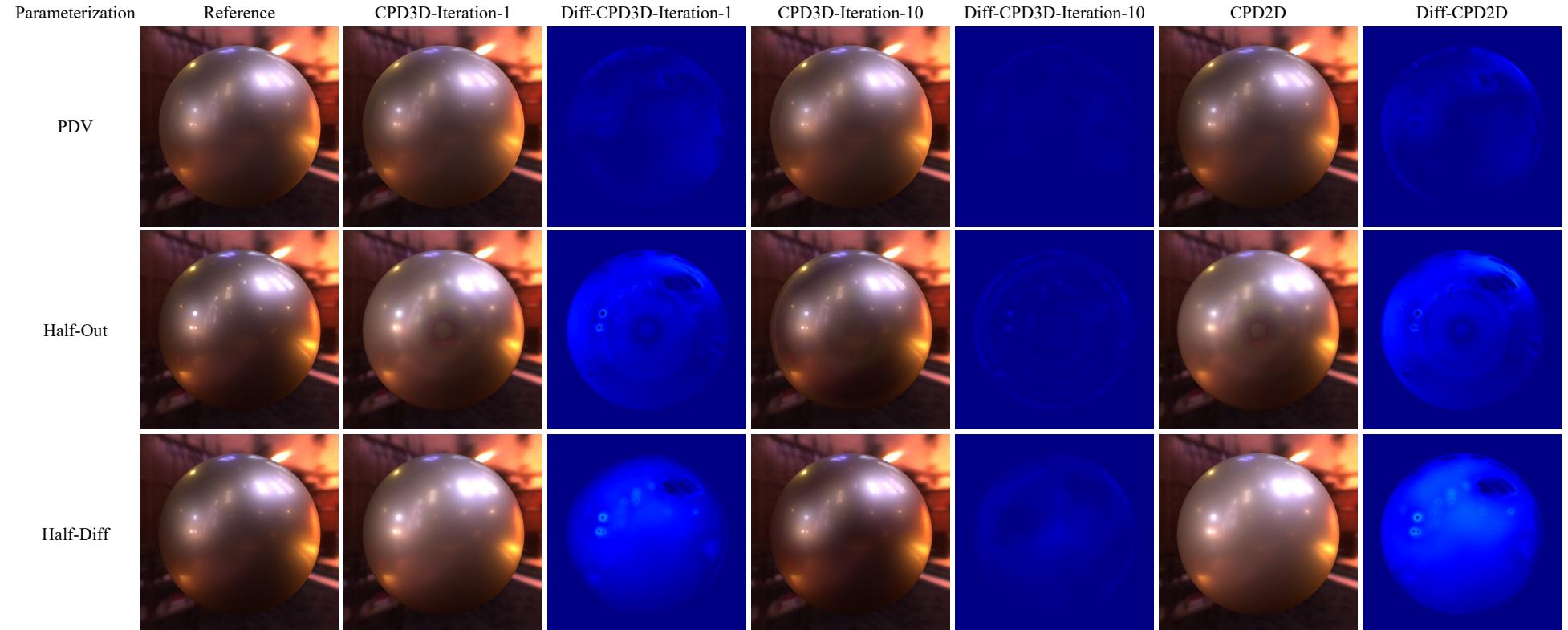
steel

teflon

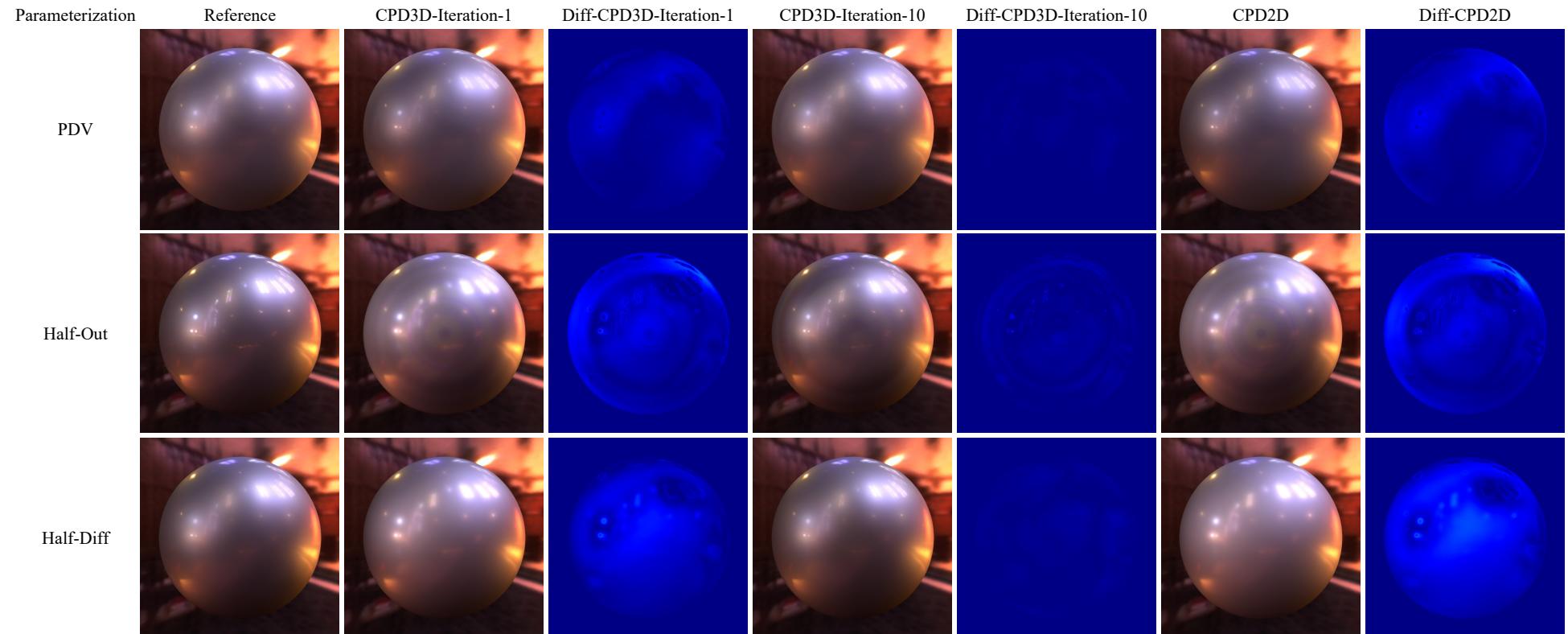
tungsten-carbide



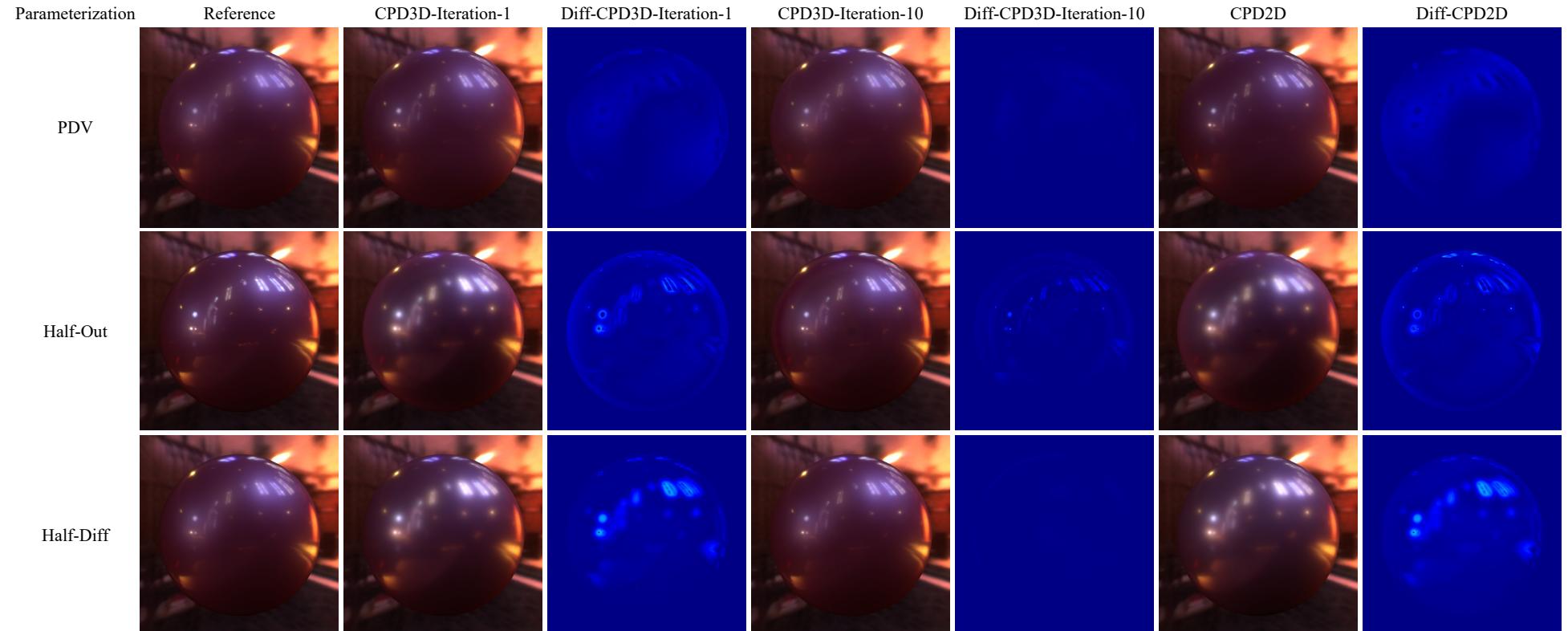
two-layer-gold



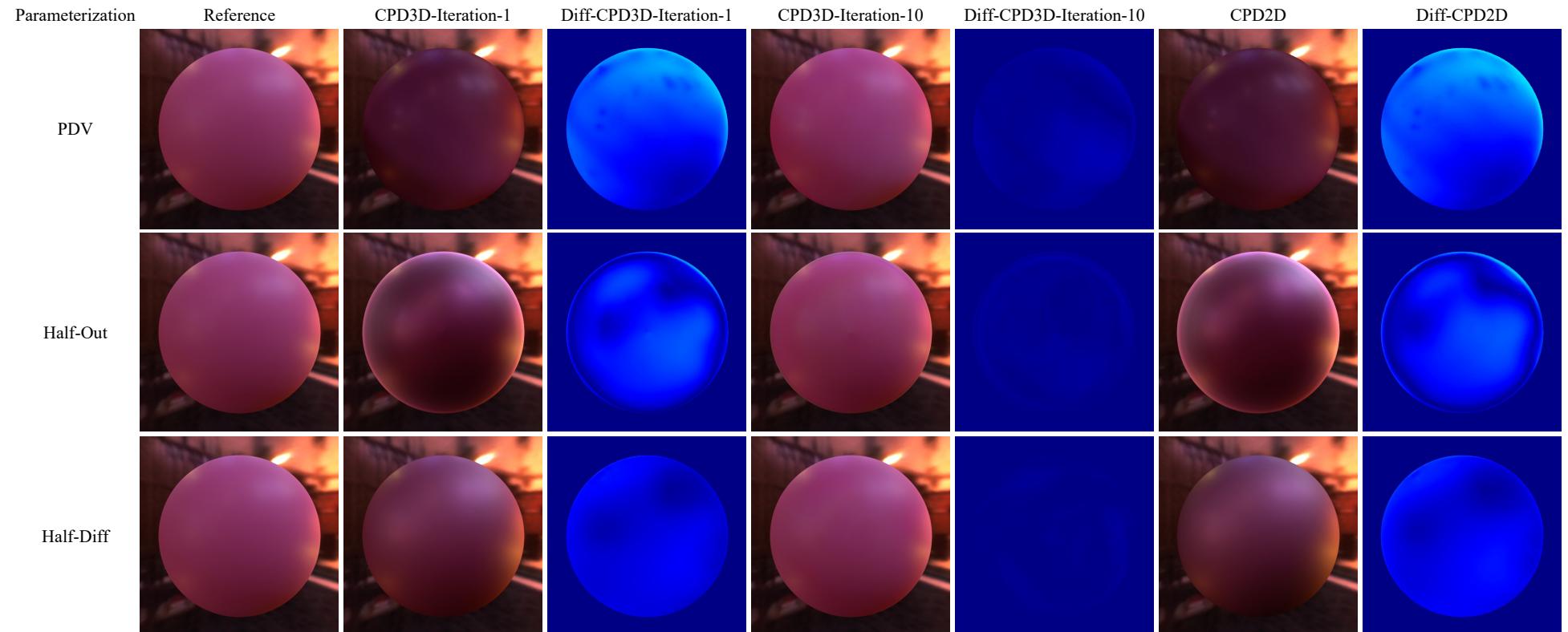
two-layer-silver



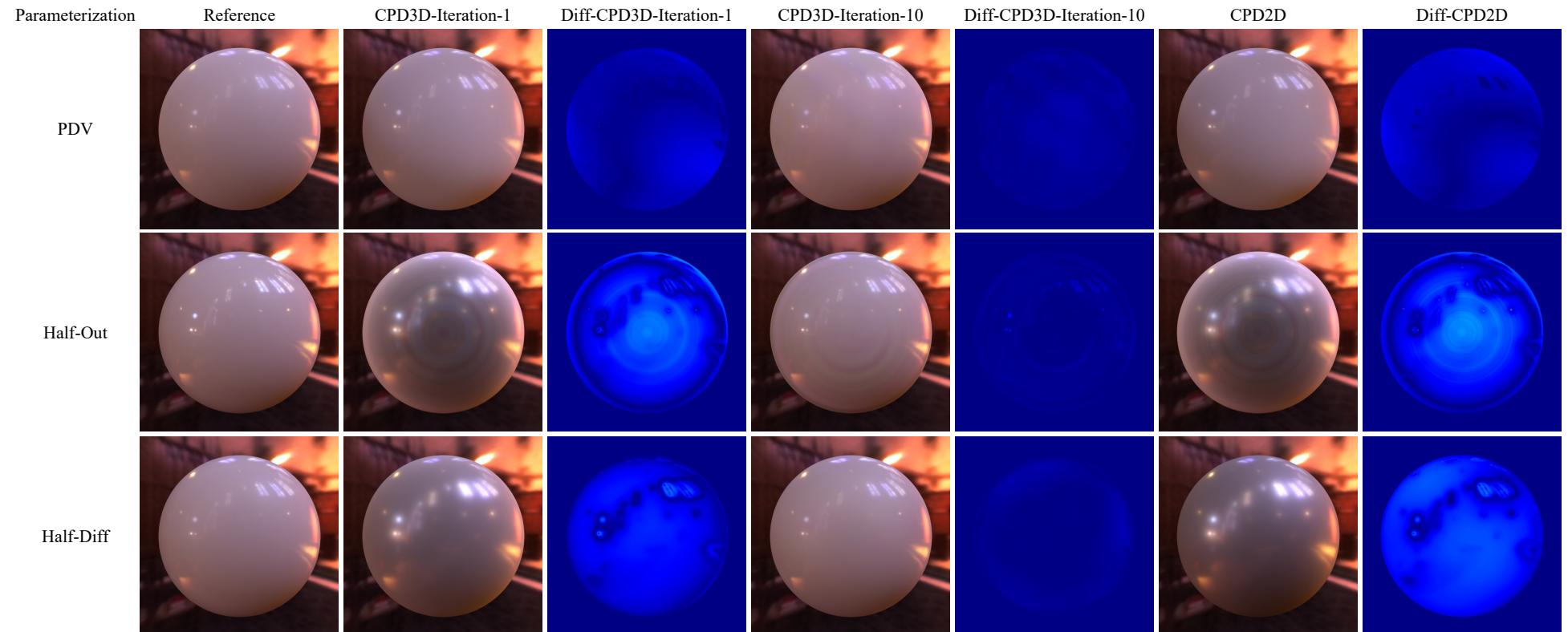
violet-acrylic



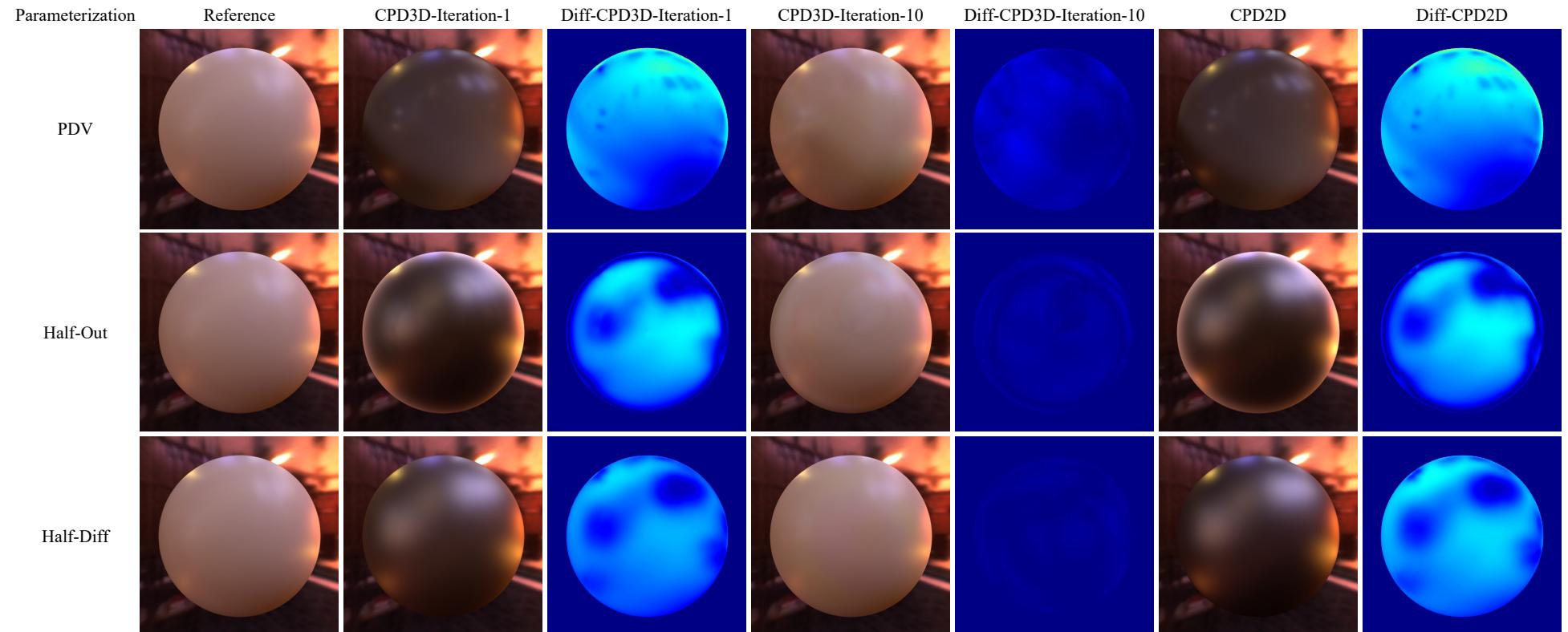
violet-rubber



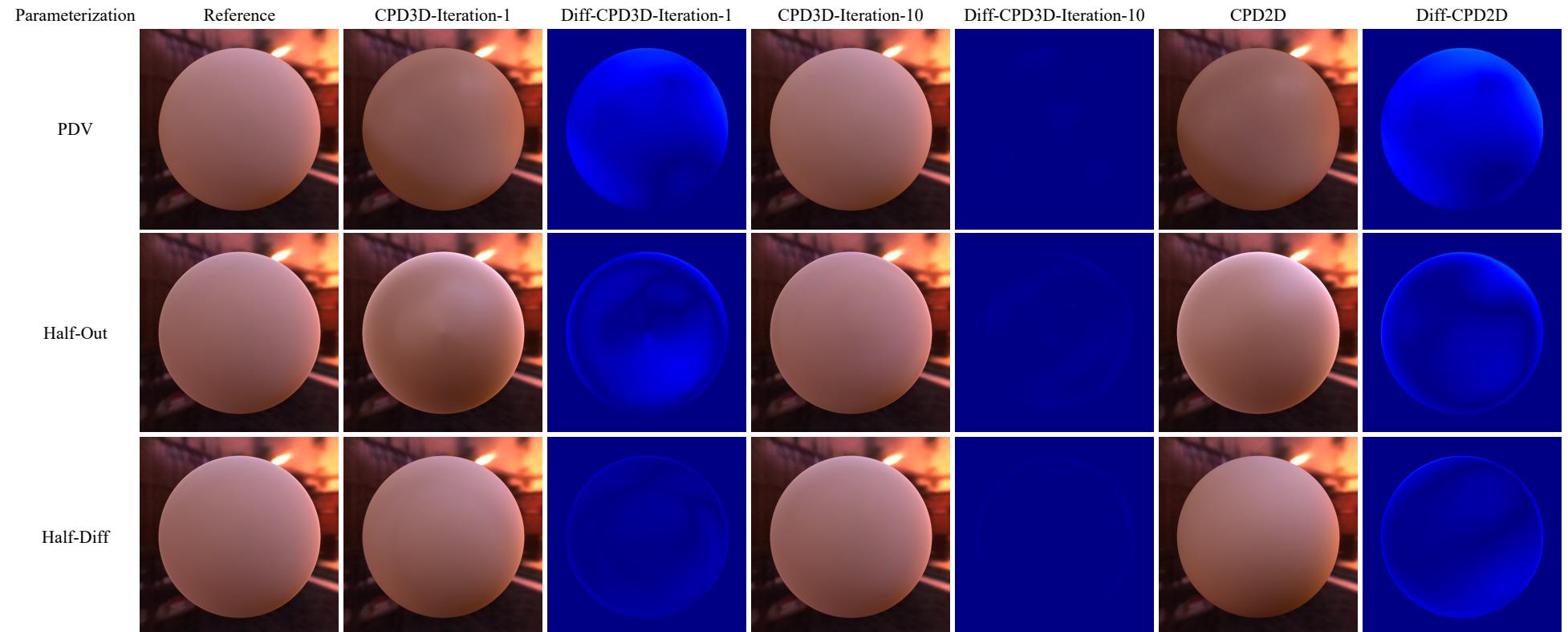
white-acrylic



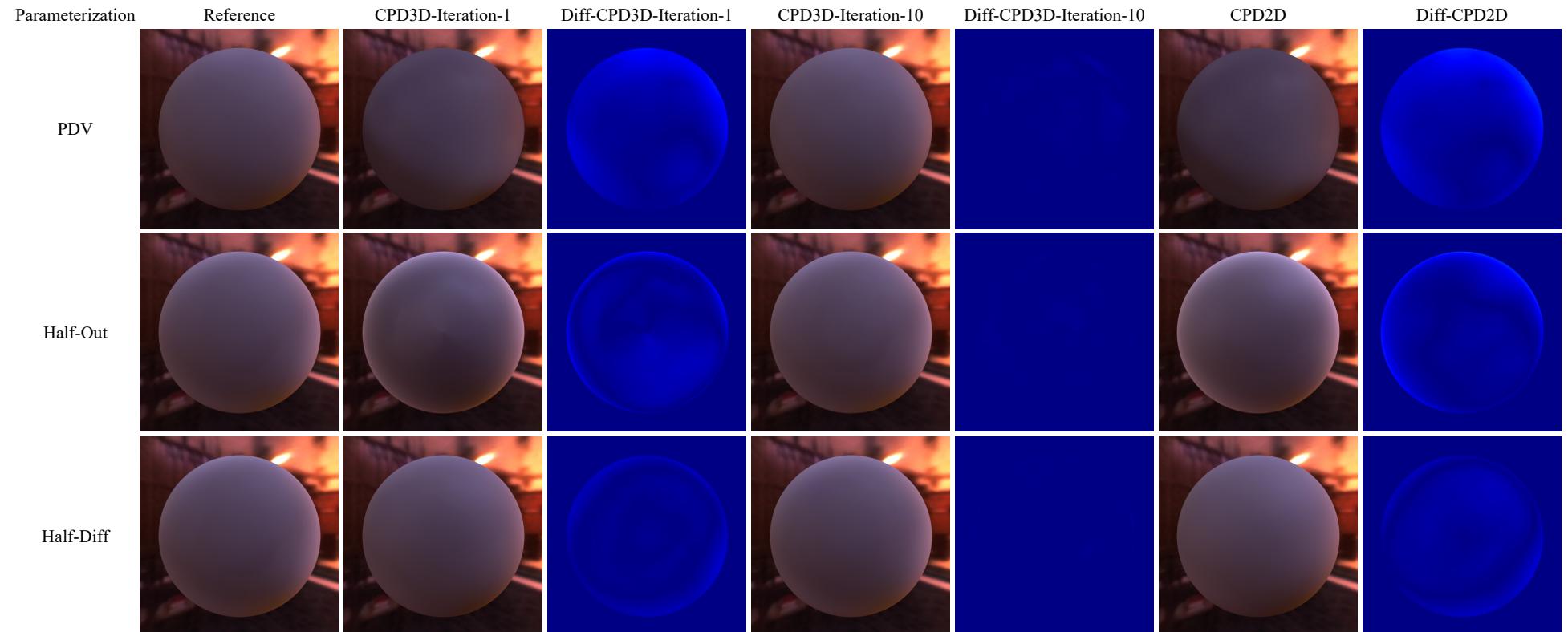
white-diffuse-bball



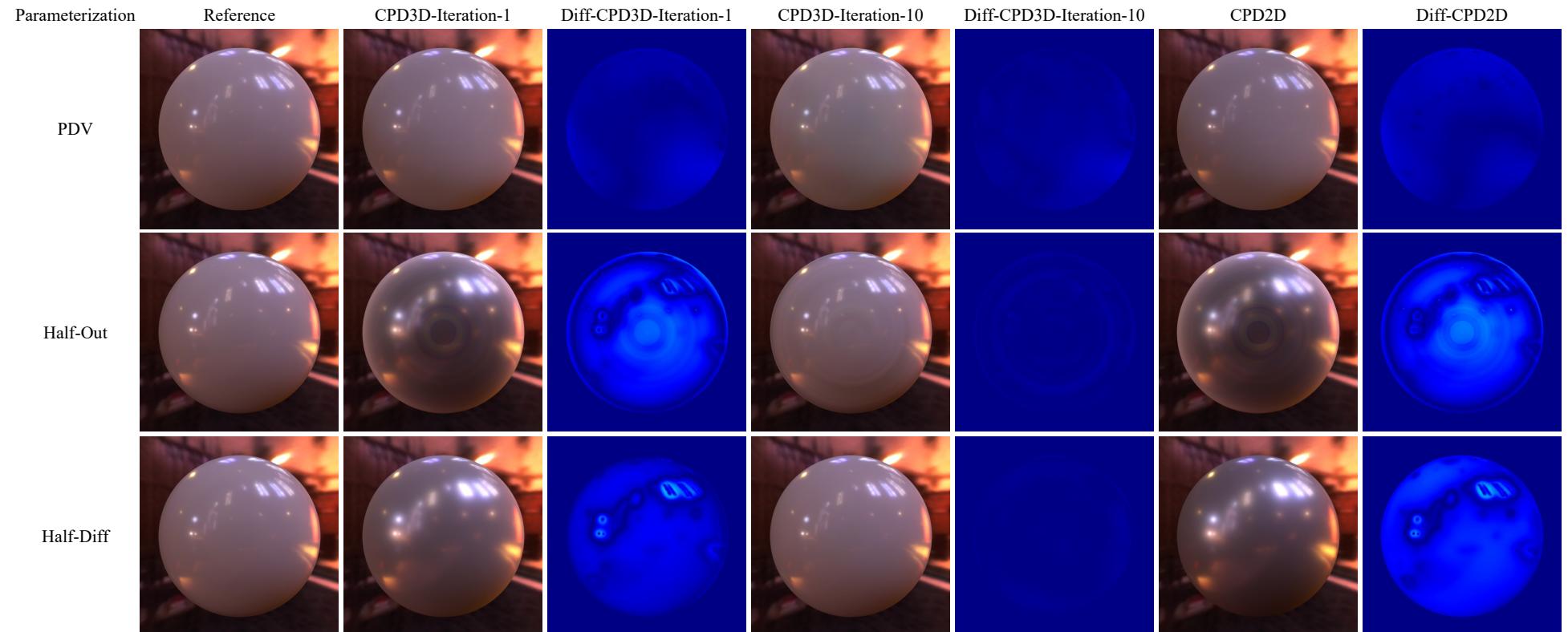
white-fabric



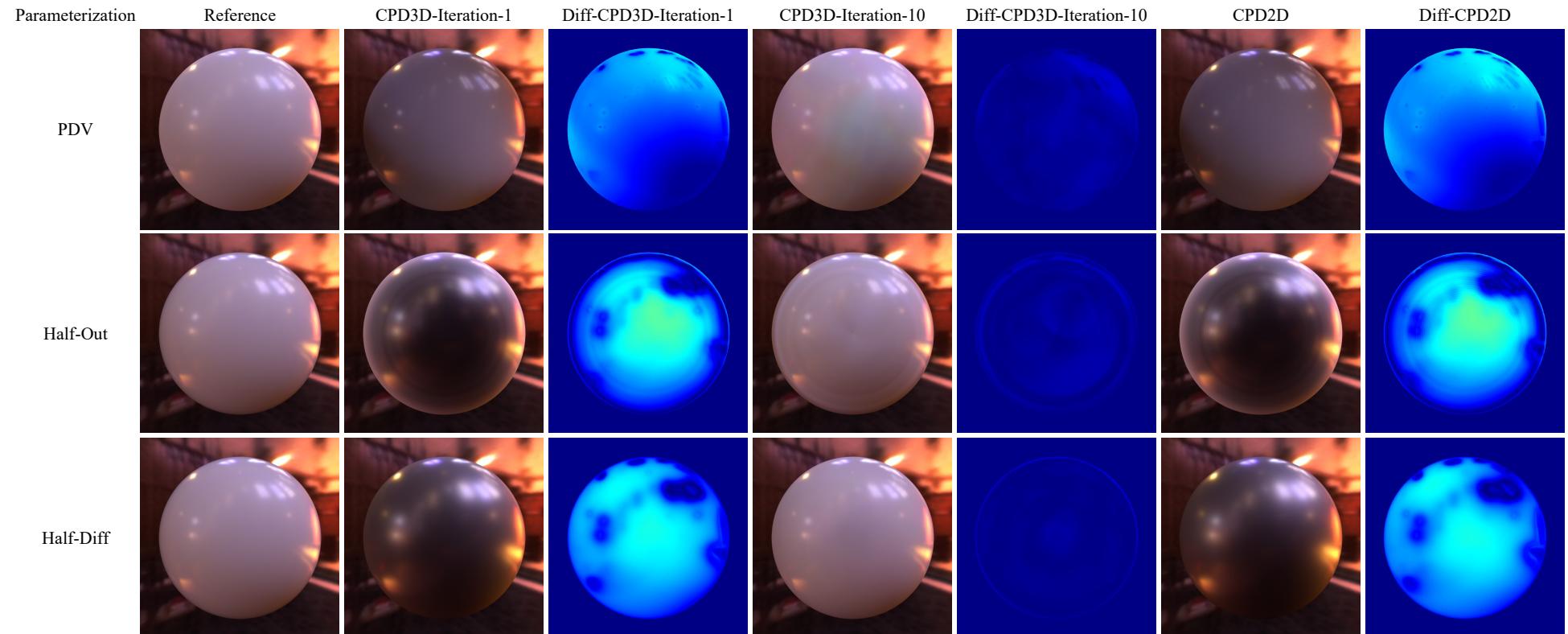
white-fabric2



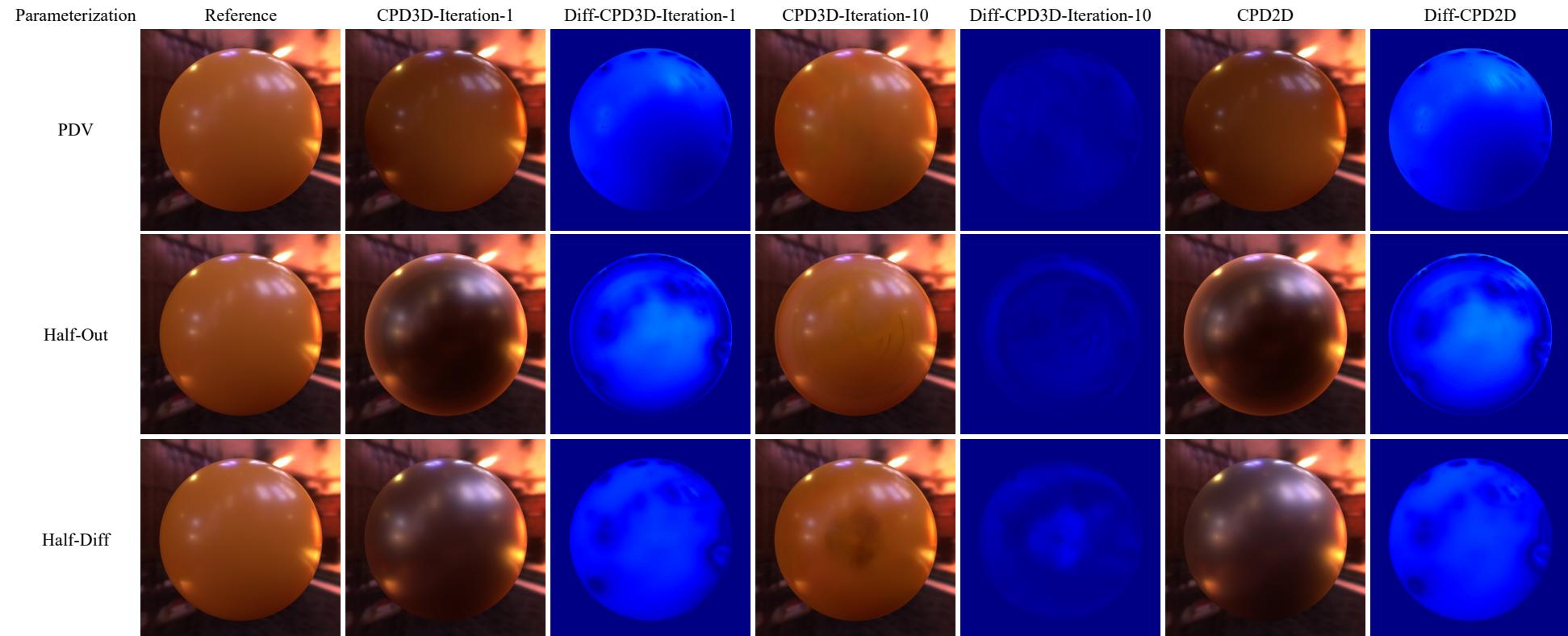
white-marble



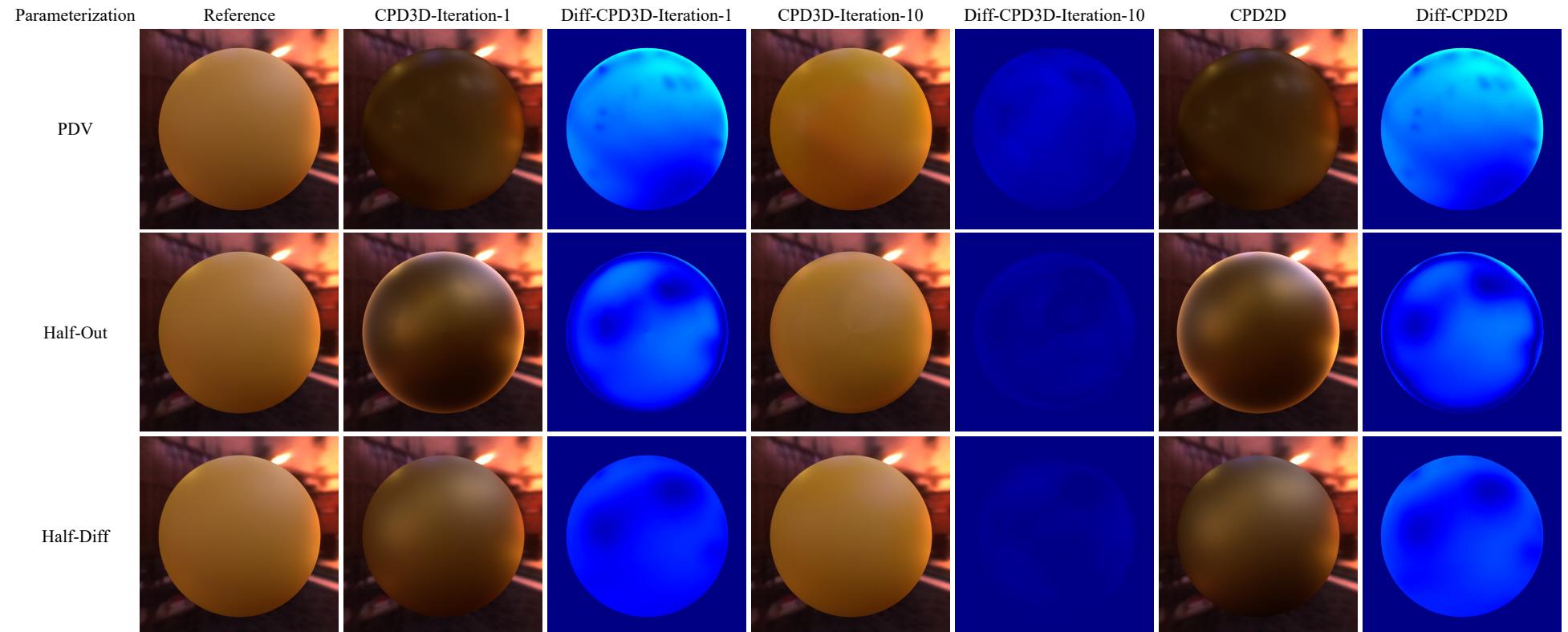
white-paint



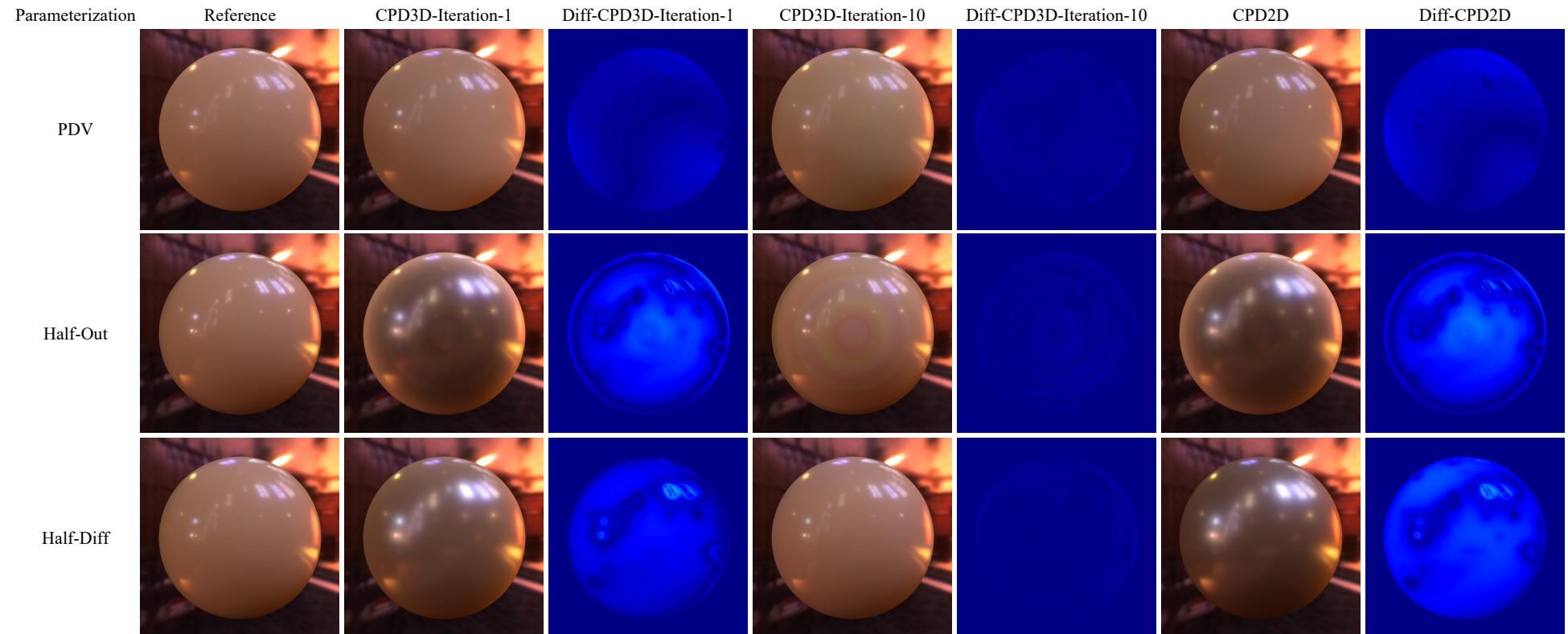
yellow-matte-plastic



yellow-paint



yellow-phenolic



yellow-plastic

