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Jonathan Simone*, University of Virginia. *A new construction of exotic 4-manifolds.*

We will introduce a new cut-and-paste technique similar to the rational blow down. In particular, we construct a class of plumbings whose boundaries also bound rational homology $S^1 \times D^3$ s and, through a cut-and-paste procedure, construct an exotic $3\mathbb{C}P^2 \# 12\overline{\mathbb{C}P}^2$. This cut and paste procedure relies on a gluing formula for the Ozsváth Szabó 4-manifold invariant, which we also prove. (Received September 27, 2017)