**Fig S1:** Optimized geometrical parameters of reaction of ReO$_4^-$ with ethylene. Bond distance in Å and angles in degrees.
Fig S2: Optimized geometrical parameters of reaction of ReO$_3$Cl with ethylene. Bond distance in Å and angles in degrees.
Fig S3: Optimized geometrical parameters of reaction of ReO₃NPH₃ with ethylene. Bond distance in Å and angles in degrees
Fig S4: Optimized geometrical parameters of reaction of ReO$_3$CH$_3$ with ethylene. Bond distance in Å and angles in degrees
Fig S5: Optimized geometrical parameters of reaction of TcO$_3$OCH$_3$ with ethylene. Bond distance in Å and angles in degrees.
Fig S6: Optimized geometrical parameters of reaction of ReO₃Cp with ethylene. Bond distance in Å and angles in degrees.