

## **ABSTRACT**

Luminescent lanthanide complexes are industrially useful in screen technologies such as smart phones, televisions, and computers. Optimizing the luminescence of these lanthanide complexes is important for their industrial applications. Alkoxide ligands are often used as oxygen donors in lanthanide complexes as they act as strong Lewis bases, to react with the strong Lewis acidity of the lanthanide metal. The alkoxide ligands of the complexes synthesized herein are fluorinated to eliminate the luminescent quenching found in the C–H bond of the protonated ligands. Complexes were synthesized with different Group 1 counter cations and with the presence of THF solvation, or lack thereof. The difference in Group 1 counter ion had a smaller change in emission of the complexes, but the change in solvation had a larger effect on the luminescence.