Synthesis of a new rhenium dicarbonyl complex for potential medical applications
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Complexes based on the cis-[Re(CO) ₂] ⁺ core present biological properties which are similar to the ones of the well-known complexes based on the fac-[Re(CO) ₃] ⁺ core. However, they are much less studied than the latter and thereby, their chemistry is more challenging to access. In this work, we report the synthesis of such a compound bearing the medically relevant clotrimazole ligand. The synthetic route chosen for this purpose was optimized and the final product was characterized by ESI-MS, IR spectroscopy, UV-Vis spectroscopy and NMR spectroscopy. Deeper analysis concerning some intermediates and the final product were also carried out by comparing their spectroscopic properties. Finally, attempts to synthesize a few analogue species were performed and assessed by ESI-MS in order to investigate the potential of rhenium dicarbonyl chemistry.
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