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Ultrafast photochromism in metal-organic complexes

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**Abstract content (Max 300 words)
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Meriwether et al conducted the first thorough investigation of the photochromic properties of the metal dithizonates in 1965. Until recently however, the photochromism of metal-dithizonates have not been studied in the ultrafast regime (in the order of femto- to picoseconds). This study serves as a continuation of the prior research conducted by G.W. Bosman in 2012. A variety of metal dithizonates are investigated using a pump-probe spectroscopic technique, namely, transient absorption spectroscopy (TAS), to determine whether they display photochromism. Furthermore, using TAS will allow for speculation of the underlying mechanism that is responsible for the photochromic behavior.

What makes these molecules particularly interesting is that the photochromic mechanism is not yet confirmed (albeit it is thought that isomerisation plays a key role) and that these molecules can potentially be incorporated into molecular electronics.

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**Main supervisor (name and email)
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