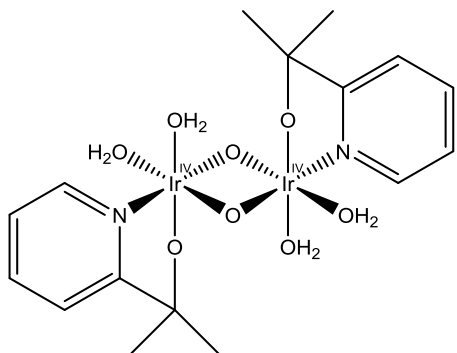


Catalog # 77-0025 [2-(pyridine-2-yl)-2-propanato]iridium(IV) dimer solution 97% (1 mM in 0.1 Molar aqueous NaIO₃)



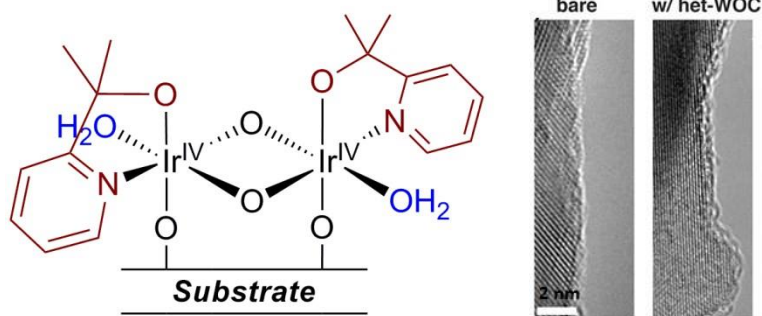
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Standard Operating Procedure

Heterogenization of the material is straightforward and can be performed in air, at ambient temperature, with no additives, applied potential or other treatment required. For most carbon-based or metal oxide substrates:

1. Dip substrate in het-WOC deposition solution (or disperse powders, if powder).
2. Wait 4-12 hours (typically overnight).
3. Remove substrate from solution (or filter out powder) and rinse with clean water.

This will cause the monolayer Ir material to be deposited on the substrate, with a surface structure as shown¹ (TEM image on iron oxide shown to the right):



The het-WOC deposition solution may be diluted, in order to increase its coverage over large substrates. As stated in the SDS, the het-WOC deposition solution is mostly comprised of water, therefore dilution with water is best. It can also be re-used repeatedly to load multiple substrates with the Ir monolayer— each loading only uses a small amount of the Ir present in solution, depending on surface area of substrate.

References:

1. *J. Am. Chem. Soc.*, **2013**, 135, 10837.
2. *J. Am. Chem. Soc.*, **2014**, 136, 13826.
3. *Nat. Commun.*, **2015**, 6, 6469.
4. *Angew. Chem. Int. Ed.*, **2015**, 54, 11428.
5. *Energy Environ. Sci.*, **2016**, 9, 1794.