



**Wolfson Department of Chemical Engineering Seminar
Lecture Hall 6, Wolfson Department of Chemical Engineering,
Wednesday June 19th at 1:30pm**

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Oxidative Coupling of Methane over Doped Mn-Na-W/SiO₂ Catalyst

Mn-Na-W/SiO₂ is one of the most studied catalysts for the direct conversion of natural gas into ethylene by oxidative coupling of methane (OCM). However, the highest C₂ yield reached so far in a single-pass tubular reactor is less than 26%, restricting the industrial feasibility of the process. Several additives were previously reported to promote its catalytic performance. However, the literature of the Mn-Na-W/SiO₂ promotion suffers from inconsistency, lack of stability tests, and several other weak points. In this work, we screen and analyze several previously tested and new additives. To do so, a set of doped catalysts were synthesized, characterized, and tested under OCM conditions. Part of the additives promoted the catalytic performance of the conventional catalyst; however, they suffered from severe deactivation, making it questionable whether it is worth adding more components to the conventional catalyst. In the presentation, interesting results from synthesis, characterization and catalysis will be discussed.

Refreshments will be served at 1:15pm