

Cathode Catalysts for Low Temperature Fuel Cells: Challenges and Possibilities

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Much of the performance still to be gained in proton exchange membrane fuel cells (PEMFCs) and direct methanol fuel cells (DMFCs) in use today is available from improvements to the cathode, traditionally made from unsupported or carbon supported platinum. This presentation is aiming not at the mere updation of the work in the field of cathode catalysts in low temperature fuel cells, but to critically address some of the vital issues in their development particularly with respect to formulation, design and fabrication of cathode materials. The current loadings of noble metals need to be reduced. In order to reduce the usage of precious metals and thus cost, the best possible performance has to be extracted from a given amount of the catalyst. It is worth emphasizing on the areas where improvements would be highly advantageous.