

High Temperature Oxidation Group

Head of Group

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Currently working on two projects in collaboration with Rolls-Royce Plc and Siemens UK respectively. Both projects entail the testing of high-temperature coatings for use in the hot sections of turbine engines. Testing procedures include both high-temperature oxidation and a novel method of high-temperature creep testing developed within the Group.

Ryan Jackson

A PhD project involving the oxidation testing of MCrAlY coatings (both HVOF and EV-PVD types) in order to determine oxidation rate kinetics, and also cracking phenomena such as sub-critical crack formation and growth. Testing techniques include static testing and subsequent characterisation using SEM (EDX and EBSD).

Ian Edmonds

An EngD project in collaboration with Rolls-Royce Plc, predominantly involving high-temperature testing of coated and uncoated alloys for use in the hot sections of turbine engines.

Frederica Schennach

A PhD project looking at early-stage oxide formation on the surface of platinum-aluminised coatings comprising adjacent grains of beta/gamma-prime phases. This work involves static furnace oxidation followed by the application of various advanced electron microscopy techniques (EBSD, XRD, and possibly TEM/FIB).