

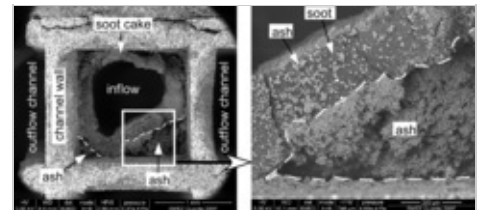
Next Generation Exhaust Aftertreatment for Diesel Propulsion Systems (NEADS)**

Scope of project

New SCR catalyst materials are investigated in order to achieve high reactivity and conversion also at low exhaust gas temperatures. In addition a ceramic foam based substrate is under development in order to replace the conventional diesel oxidation catalyst improving the performance and lifetime of the subsequent aftertreatment system (particulate filter and or SCR system).

The project is organised in 3 sub-projects: Sub-project I develops zedites based catalytic materials for passenger cars (as well as medium and heavy duty vehicles). Sub-project II is aiming at the development of the micro reactor, while sub-project III investigates emission formation and reduction paths from the combustion through the aftertreatment systems.

The sub-projects in turn make use of the tools and analytics as well as knowledge developed and acquired in 3 tasks «new instrumentation for particle characterisation», «numerical simulation» and «atmospheric interactions».



SEM-image of a DPF section showing the soot accumulation on a channel (left) and distinguishing the soot from the ash layer (middle and right).

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**) Finished project

<http://www.ccem.ch/neads>