

## Course

# Characterization in Catalysis Research

NIOK organizes a 3-day course on the characterization of solid catalysts from 10 to 12 February 2014, at the University of Twente.

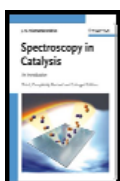
The course covers modern *in-situ* techniques to study heterogeneous catalysts during catalytic testing. The emphasis of the course will be on characterization of industrial heterogeneous catalysts by means of spectroscopy, microscopy and diffraction.

In addition, some attention will be given to important model systems such as single-crystal surfaces, and particles on planar supports.

The number of participants is limited to 60. The fee includes a student version of the course book "Spectroscopy in Catalysis", course material, coffee/tea, three lunches, and two dinners, and amounts to:

- € 275 for participants from academia and Viran members<sup>i</sup>
- € 900 for industrial participants

It is possible to book a hotel room at a special NIOK rate in conference hotel Drienerburght, where the course will be held.



Registration can be done via email to [characterisation@niok.nl](mailto:characterisation@niok.nl).

Please indicate name, affiliation, address, title, position, phone, and email. You will receive a confirmation of registration along with an invoice with payment instructions and details for the hotel booking.

**Deadline for application:  
23 December 2013**

### Subjects covered

Vibrational spectroscopy (IR, Raman)  
Temperature programmed techniques (TPR, TPO, TDS)  
X-ray photoelectron spectroscopy (XPS)  
X-ray diffraction (XRD)  
Low energy ion scattering (LEIS)  
X-ray absorption spectroscopy (XANES, EXAFS)  
Electron Microscopy (SEM, TEM)  
Surface science techniques

### Speakers include

Prof.dr. Bert Weckhuysen (U-Utrecht)  
Prof. dr. Hans Niemantsverdriet (TU-Eindhoven)  
Dr. Andy Beale (UC-London)  
Dr. Huub Kooijman (Shell)  
Prof.dr. Jacob Moulijn (Cardiff-U)  
Dr. Patricia Kooyman (TU-Delft)  
Prof.dr.ir. Leon Lefferts (U-Twente)  
Prof.dr. Guido Mul (U-Twente)  
Dr. Barbara Mojet (U-Twente)

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<sup>i</sup> One participant per VIRAN member at reduced price of €275