



**HOKKAIDO**  
UNIVERSITY

# Pump-Probe **2 beam** XAS spectra

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# In order to understand Catalytic Reaction

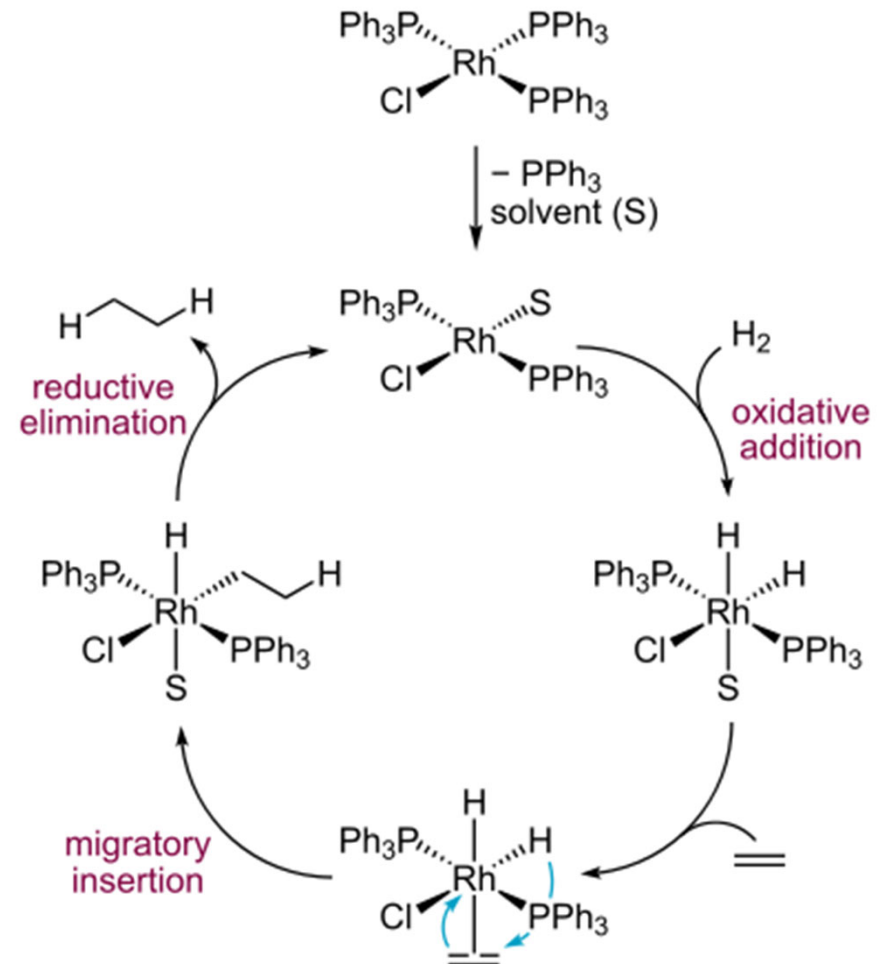
## Catalytic reaction.

To decide the active site and determine its structure.

To determine the intermediate structure and reaction step.

To determine the kinetics and the mechanism

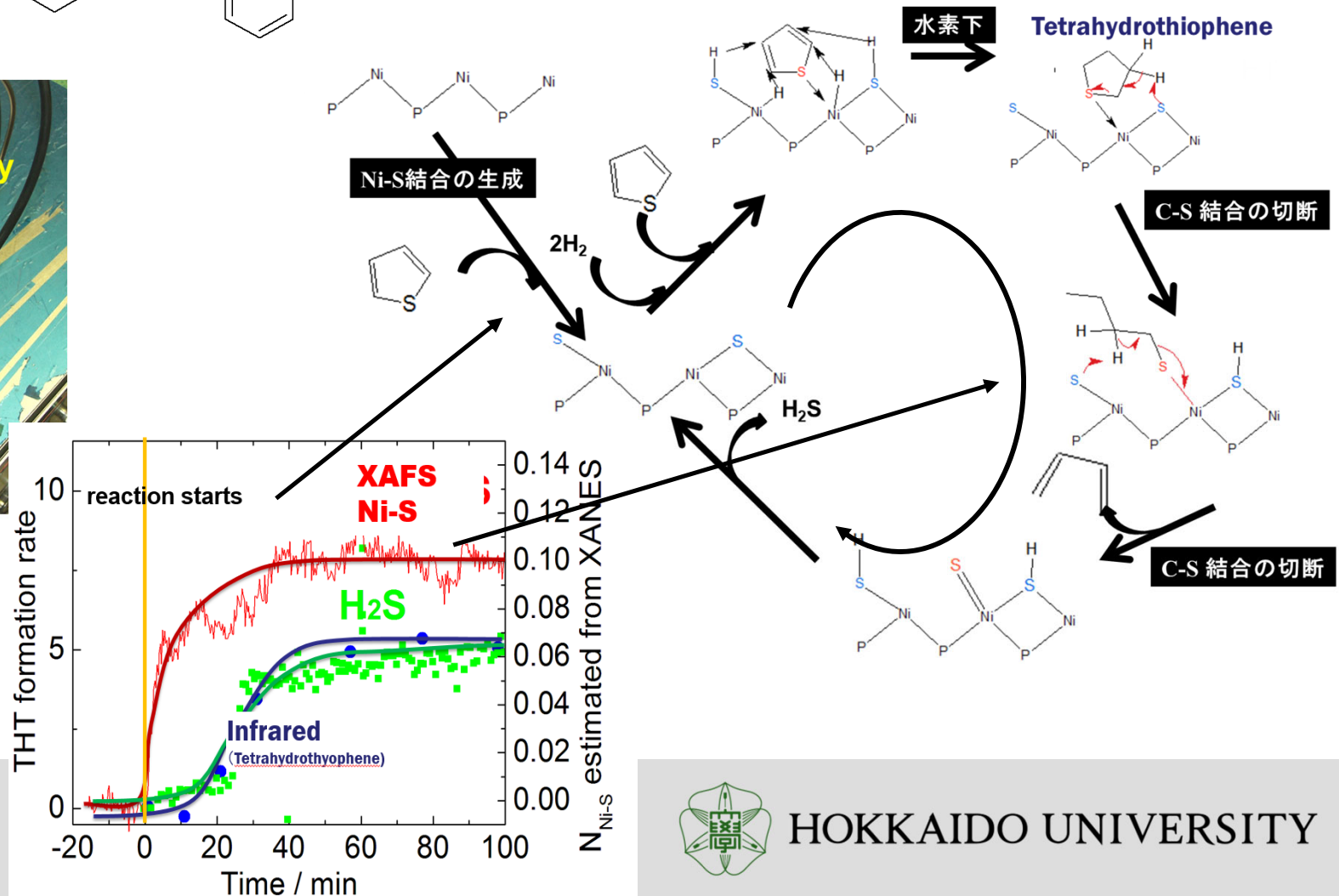
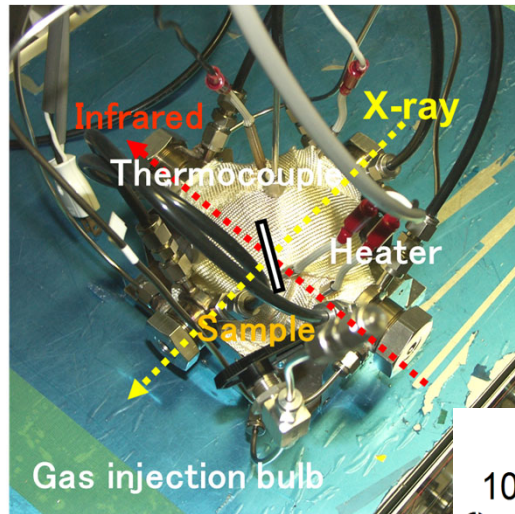
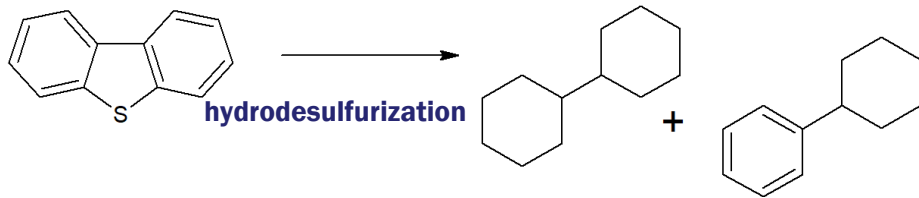
To write the reaction cycle.



**Wilkinson Catalyst**

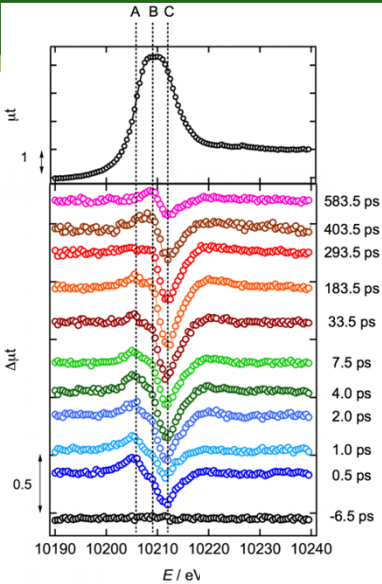
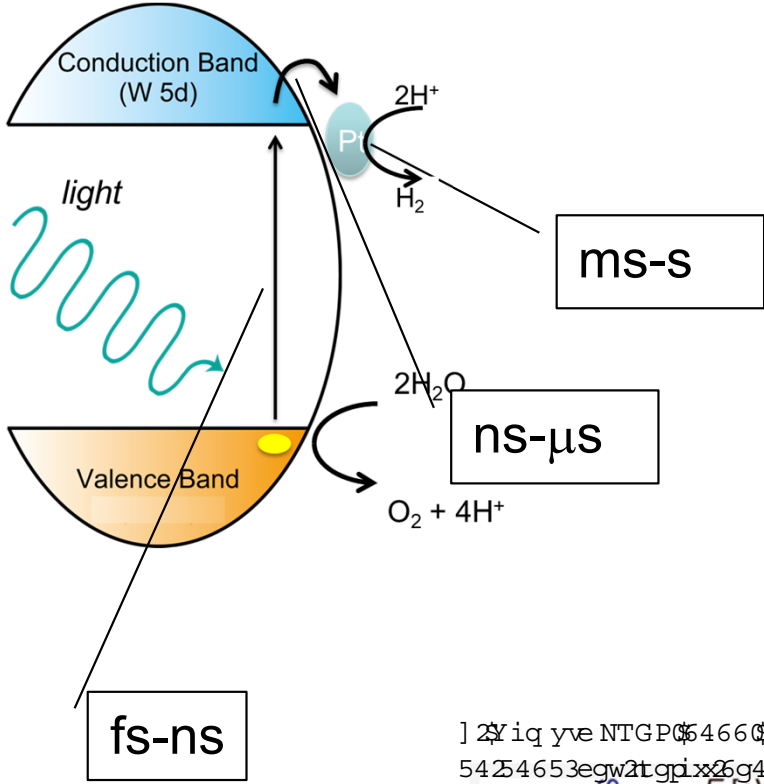
# Correlation = simultaneous measurement

## Ni<sub>2</sub>P



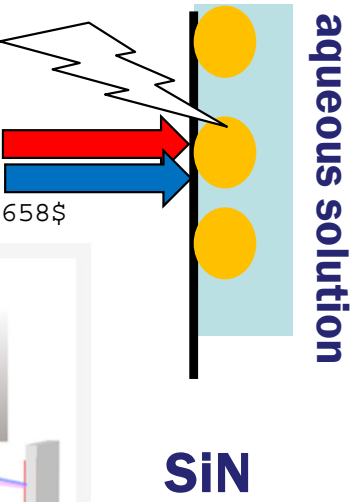
# Proposal: Photoexcitation process and carrier

Yiq yve EkGM 645: 09057:8157:;



**Simultaneous measurement of O and Co, Pt. with 2 beam.**

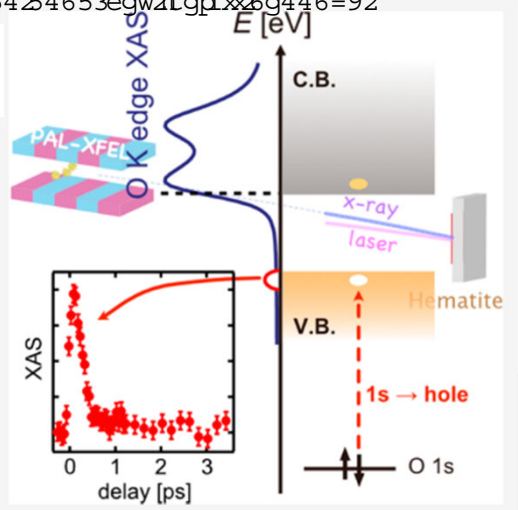
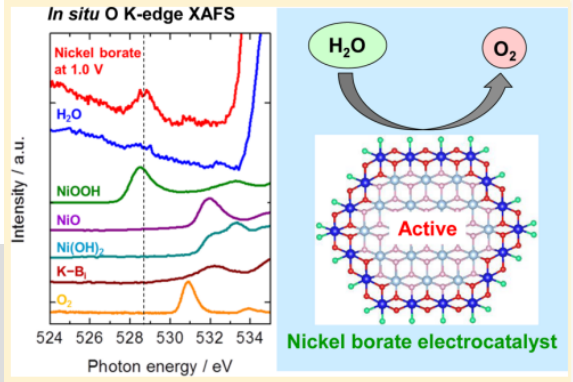
CoOOH



**electron hole kinetics.**

Yiq yve NTGP 4660570864; 18658\$ 54254653egw2tgpix26g446=92

5\$ 2 swlme NTGG \$459055=05=6; =1 5=6< : \$4254653egw2tgg2f4: 5462



## Necessary conditions

**Two beams have the same size to monitor the same position,**

**Two beams have the same timing after the pump beam.**

**The same pulse width**