

# Breakout Session A

## Novel opportunities of XFEL experiments with magnetic fields

13:15-13:25

### Opening talk

The future of the high magnetic field science

Y. H. Matsuda (Univ. Tokyo)

13:25 - 13:35

### From facility side

Recent progress of “PINK” system

Y. Kubota (SACLA)

13:35 - 14:20

### From user side

Science and techniques at above 100 Tesla

A. Ikeda (UEC)

Direct evidence of magnetic field-induced metastable martensitic phase  
for multifunctional Heusler alloys

T. Kihara (Okayama Univ.)

Probing electronic phase transitions via 100 Tesla XRD

M. Nohara (Hiroshima Univ.)

14:20 - 15:15

### Round table discussion

Chair: A. Ikeda (UEC)

## Discussion: Scientific goal

- Oxygen
- Strongly correlated materials
- 122 intermetallics (Chemical bonding in solids)
- Heusler alloys
- Geometrically frustrated spin systems

## Discussion: Technical

- Powder XRD
- X-ray emission spectroscopy
- Dispersive x-ray absorption spectroscopy
- Valence of Ce Yb Eu Sm
- X-ray imaging: e.g. DFXM
  
- Magnetic scattering (3, 4 orders of magnitude weaker)
- XMCD
- TbFe
- Usually magnetic reflection is even weaker than CDW
  
- Double pulse for brighter data or time resolved data