*Chemical and Energy Sciences (CES):*
A community of scientists using synchrotron radiation in the areas of chemical transformations, catalysis, electrochemistry, energy conversion and storage, and hydrogen storage research.

# *Chemical and Energy Sciences at NSLS-II*

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-The atomistic, real time understanding of the mechanism of chemical reactions,
-design of new or more efficient chemical processes,
-rational design of high-activity, high-selectivity, low-cost catalysts.

Development of renewable energy sources, storage of energy products
-portable energy sources
-nanocomposite materials for energy applications

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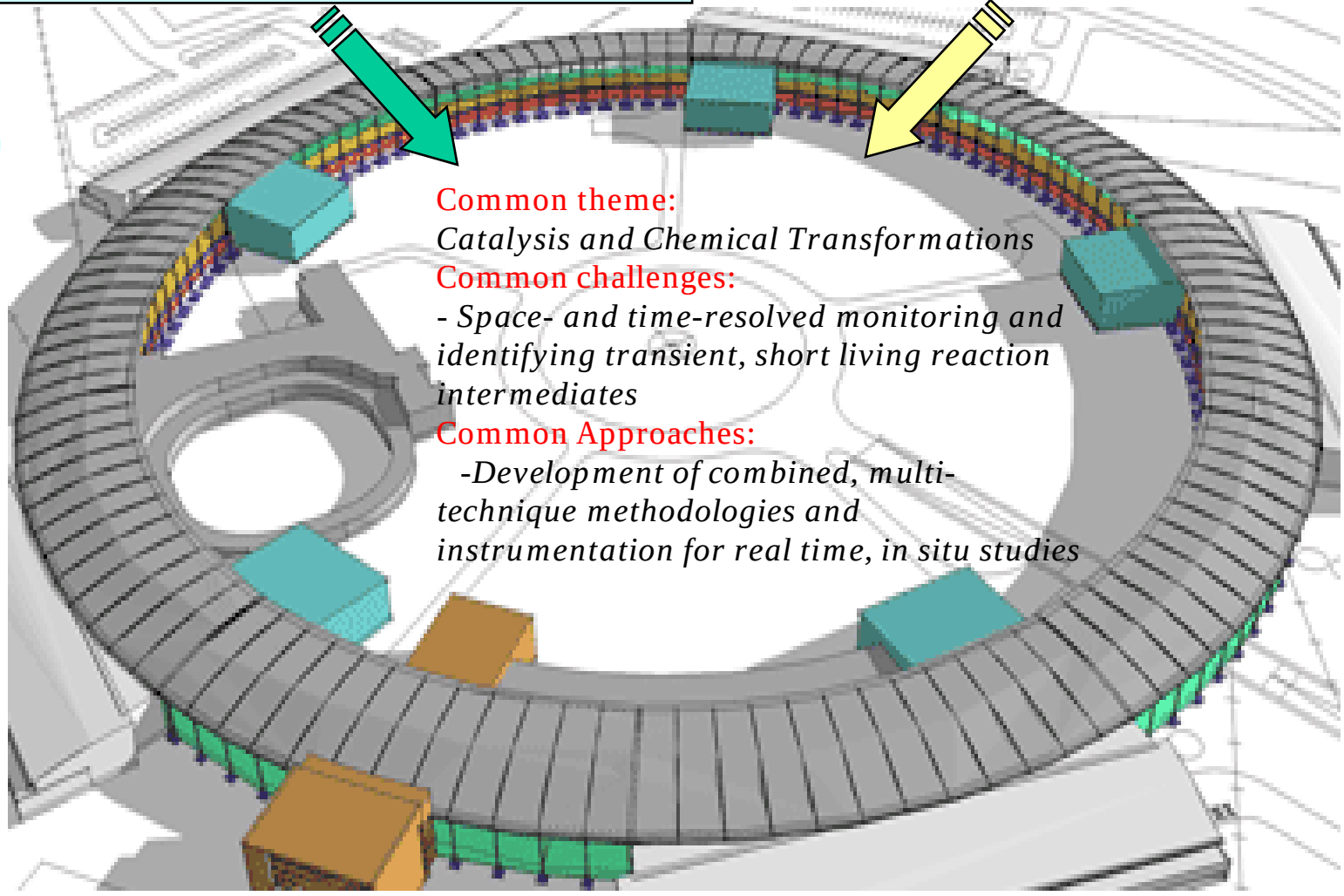

Common theme:
*Catalysis and Chemical Transformations*
Common challenges:
*- Space- and time-resolved monitoring and identifying transient, short living reaction intermediates*
Common Approaches:
*-Development of combined, multi-technique methodologies and instrumentation for real time, in situ studies*

This is a "strategic planning workshop"

Our charge:

-identify CES science themes,
communities,
existing and future challenges
the need for advanced NSLS-II facilities
their potential impact

-Contribute to the white paper (10 pages)
Deadlines: March 14 (1st draft), March 25 (final)

Organizing committee:

**J. Chen** (U. Delaware), **S. Bare** (UOP LLC), **A. Frenkel** (YU), **D. Mullins** (ORNL), **J. Rodriguez** (BNL Chemistry), **D. Starr** (BNL CFN)

International advisory board:

**A. Bell** (Berkeley), **R. Frahm** (U. Wuppertal), **B. Gates** (UC Davis)
**E. Iglesia** (Berkeley), **B. Koel** (Lehigh), **C. Marshall** (ANL), **R. Schlögl** (FHI)