TOPICS FOR FUTURE H2020 CALLS

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1. **Fuel & Core**
   - Code-to-code & Code-to-data comparison

2. **Design & Thermohydraulics**
   - Decay heat removal systems (natural convection)
   - Vibrations in GenIV reactions

3. **Materials & Coolant technology**

   - Performance of materials at normal & elevated T:
     - Corrosion/passivation – Optimization & control of gas atmosphere
     - Degradation of materials in GenIV systems – Irradiation damage, Ageing (phenomena, extrapolation)
     - Wear in GenIV systems (source of impurities,)
     - Accident tolerant claddings for MOX-type fuel (exploratory study)
     - Optimization of HX-related materials
   - Ceramic materials for GenIV systems:
     - SiCf-SiC composites
     - Thermal barriers in gas-cooled systems
   - Material interactions in Gen IV systems:
     - Normal conditions (compatibility of materials, …)
     - Accident conditions (formation of eutectics, …)
   - Reflector & shielding materials for GenIV cores:
     - Optimization
   - Core catcher materials for GenIV systems:
     - Optimization of sacrificial materials
   - Gas & waste management in GenIV reactors
     - Removal of activity (FPs, activated products from contaminated coolant
     - Tritium management
   - Transport & deposition of activated products in GenIV systems:
     - Phenomenology, Modelling (deposition models)
     - Decontamination
   - Blowers in gas-cooled systems:

- Wide-range & T-resistant blowers for safety (helium, nitrogen)

4. Power conversion systems

5. Safety & Instrumentation

- Core catcher