

## “Exploring a Chemical Frontier at the Bottom of the Periodic Table”\*

Date: November 11 (Fri), 2022, 14:00~17:30 JST

Place: O-okayama, North Bldg 1, 1F Meeting Room + [Live on Zoom](#) ←click to register

- **Session 1** Chairperson: Prof. Koichiro TAKAO
  - 14:00-14:05 Opening Remark
  - 14:05-14:45 Dr. Juliane MÄRZ (IRE, HZDR, Germany)
    - “Fundamental research on f-elements and fission products at the Institute of Resource Ecology at HZDR”
  - 14:45-15:15 Prof. Dr. Satoru TSUSHIMA (IRE, HZDR, Germany; WRH, IIR, TokyoTech)
    - “Computational Study on Actinide Interactions with Peptides”
  - 15:15-15:35 Mr. Tomoyuki TAKEYAMA (ZC, IIR, TokyoTech)
    - “Rapid and Direct Reduction of  $\text{NpO}_2^{2+}$  to  $\text{Np}^{4+}$  Induced by Complexation”



57 La 5d6s <sup>2</sup>	58 Ce 4f5d6s <sup>2</sup>	59 Pr 4f <sup>3</sup> 6s <sup>2</sup>	60 Nd 4f <sup>4</sup> 6s <sup>2</sup>	61 Pm 4f <sup>6</sup> 6s <sup>2</sup>	62 Sm 4f <sup>6</sup> 6s <sup>2</sup>	63 Eu 4f <sup>7</sup> 6s <sup>2</sup>	64 Gd 4f <sup>7</sup> 5d6s <sup>2</sup>	65 Tb 4f <sup>9</sup> 6s <sup>2</sup>	66 Dy 4f <sup>10</sup> 6s <sup>2</sup>	67 Ho 4f <sup>11</sup> 6s <sup>2</sup>	68 Er 4f <sup>12</sup> 6s <sup>2</sup>	69 Tm 4f <sup>13</sup> 6s <sup>2</sup>	70 Yb 4f <sup>14</sup> 6s <sup>2</sup>	71 Lu 4f <sup>14</sup> 5d6s <sup>2</sup>
89 Ac 6d7s <sup>2</sup>	90 Th 6d <sup>2</sup> 7s <sup>2</sup>	91 Pa 5f <sup>2</sup> 6d7s <sup>2</sup>	92 U 5f <sup>4</sup> 6d7s <sup>2</sup>	93 Np 5f <sup>4</sup> 6d7s <sup>2</sup>	94 Pu 5f <sup>6</sup> 7s <sup>2</sup>	95 Am 5f <sup>7</sup> 7s <sup>2</sup>	96 Cm 5f <sup>7</sup> 6d7s <sup>2</sup>	97 Bk 5f <sup>9</sup> 7s <sup>2</sup>	98 Cf 5f <sup>10</sup> 7s <sup>2</sup>	99 Es 5f <sup>11</sup> 7s <sup>2</sup>	100 Fm 5f <sup>12</sup> 7s <sup>2</sup>	101 Md 5f <sup>13</sup> 7s <sup>2</sup>	102 No 5f <sup>14</sup> 7s <sup>2</sup>	103 Lr 5f <sup>14</sup> 6d7s <sup>2</sup>

- **Session 2** Chairperson: Prof. Satoru TSUSHIMA
  - 15:45-16:15 Prof. Koichiro TAKAO (ZC, IIR, TokyoTech)
    - “Introduction of Nuclear Fuel Materials Selective Precipitation (NUMAP) Reprocessing and Roadmap for Implementation to Actual Nuclear Fuel Cycles”
  - 16:15 -16:35 Prof. Ayumi ISHII (Teikyo Univ. of Sci.)
    - “Near-infrared Light Control with Lanthanide-based Hybrid Materials”
  - 16:35-16:55 Dr. Masashi KANEKO (JAEA)
    - “Selectivity of Minor Actinides over Lanthanides Based on Chemical Bonding by Means of Density Functional Theory Calculation”
  - 16:55-17:15 Dr. Masahiko NAKASE (ZC, IIR, TokyoTech)
    - “Cheminformatics approaches to explore diluent for Minor Actinide partitioning”
  - 17:15-17:25 Free Discussion
  - 17:25-17:30 Closing

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- **Venue (In-person)**

Meeting Room (N1-158) in North Bldg 1, North Area of O-okayama Campus, Tokyo Tech

