

## Peer-Reviewed Papers

- (1) Effect of bacterial siderophore on cesium dissolution from biotite  
T. Kimura, S. Fukutani, M. Ikegami, F. Sakamoto, N. Kozai, B. Grambow, M. Yoneda  
Chemosphere, **276**, 130121 (2021).
- (2) Radiocesium in Shiitake mushroom: Accumulation in living fruitbodies and leaching from dead fruit bodies  
F. Guido-Garcia, F. Sakamoto, K. David, N. Kozai, B. Grambow  
Chemosphere, **279**, 130511 (2021).
- (3) Sewage sludge ash contaminated with radiocesium: Solidification with alkaline-reacted metakaolinite (geopolymer) and Portland cement  
N. Kozai, J. Sato, T. Osugi, I. Shimoyama, Y. Sekine, F. Sakamoto, T. Ohnuki  
J. Hazard. Mater., **416**, 125965 (2021).
- (4) Hydration structures of barium ions: Ab initio molecular dynamics simulations using the SCAN meta-GGA density functional and EXAFS spectroscopy studies  
A. Yamaguchi, K. Kobayashi, Y. Takahashi, M. Machida  
Chem. Phys. Lett., **780**, 138945 (2021).
- (5) Fe, Mn and  $^{238}\text{U}$  Accumulations in *Phragmites australis* Naturally Growing at the Mill Tailings Pond; Iron Plaque Formation Possibly Related to Root-Endophytic Bacteria Producing Siderophores  
Y. Nakamoto, K. Doyama, T. Haruma, X. Lu, K. Tanaka, N. Kozai, K. Fukuyama, S. Fukushima, Y. Ohara, K. Yamaji  
Minerals, **11**, 1337 (2021).
- (6) Ten years after the NPP accident at Fukushima : review on fuel debris behavior in contact with water  
B. Grambow, A. Nitta, A. Shibata, Y. Koma, S. Utsunomiya, R. Takami, K. Fueda, T. Ohnuki, C. Jegou, H. Laffolley, C. Journeau  
J. Nucl. Sci. Technol., **59**, 1 (2022).
- (7) Chemical species of iodine during sorption by activated carbon - Effects of original chemical species and fulvic acids -  
T. Kato, N. Kozai, K. Tanaka, D. Kaplan, S. Utsunomiya, T. Ohnuki  
J. Nucl. Sci. Technol., **59**, 580 (2022).
- (8) Uranium (VI) sorption on illite under varying carbonate concentrations; Batch experiments, modeling, and cryogenic time-resolved laser fluorescence spectroscopy study  
H. Mei, N. Aoyagi, T. Saito, N. Kozai, Y. Sugiura, Y. Tachi  
Appl. Geochem., **136**, 105178 (2022).
- (9) Sorption of Pu(IV) on biogenic Mn oxide and complexation of Pu(IV) with organic ligands secreted by fungal cells  
K. Tanaka, Y. Tani, N. Kozai, T. Ohnuki

J. Radioanal. Nucl. Chem., **331**, 1109 (2022).

(10) Insights into boron removal from water using Mg-Al-LDH; Reaction parameters optimization & 3D-RSM modeling

O. Eljimal, I. Maamoun, S. Alkudhayri, R. Eljamal, O. Falyouna, K. Tanaka, N. Kozai, Y. Sugihara

J. Water Process Eng., **46**, 102608 (2022).

(11) Ion-selective adsorption of lead by a two-dimensional terbium oxalate framework

T. Nankawa, Y. Sekine, T. Yamada

Bull. Chem. Soc. Jpn., **95**, 825 (2022).

### **Invited Talks at International Conferences**

(1) Cluster aggregation over spatiotemporal hierarchy: complex fluids reconstruction to nano architecture

N. Aoyagi

Invited talk in Pacificchem 2021, Dec. 16-21, 2021, Honolulu, U.S.A. (On line).

### **Books and Scientific Articles**

None

### **Patents**

(1) 長縄弘親, 永野哲志, 鈴木英哉

液液系多段装置及びそれを用いた特定物質の製造方法

特願 2021-69670, 出願日 2021 年 4 月 16 日

(2) 長縄弘親, 永野哲志

土壌固化組成物を用いる土壌の固化方法

日本製紙株式会社との共同出願, 特許第 6884335 号, 登録日 2021 年 5 月 14 日

(3) 長縄弘親, 柳瀬信之, 永野哲志, 三田村久吉

土壌固化組成物の製造方法およびそれを用いた土壌固化方法

株式会社大林組, 日本製紙株式会社との共同出願, 特許第 6950889 号, 登録日 2021 年 9 月 28 日

### **Awards**

None

### **Press Release**

None