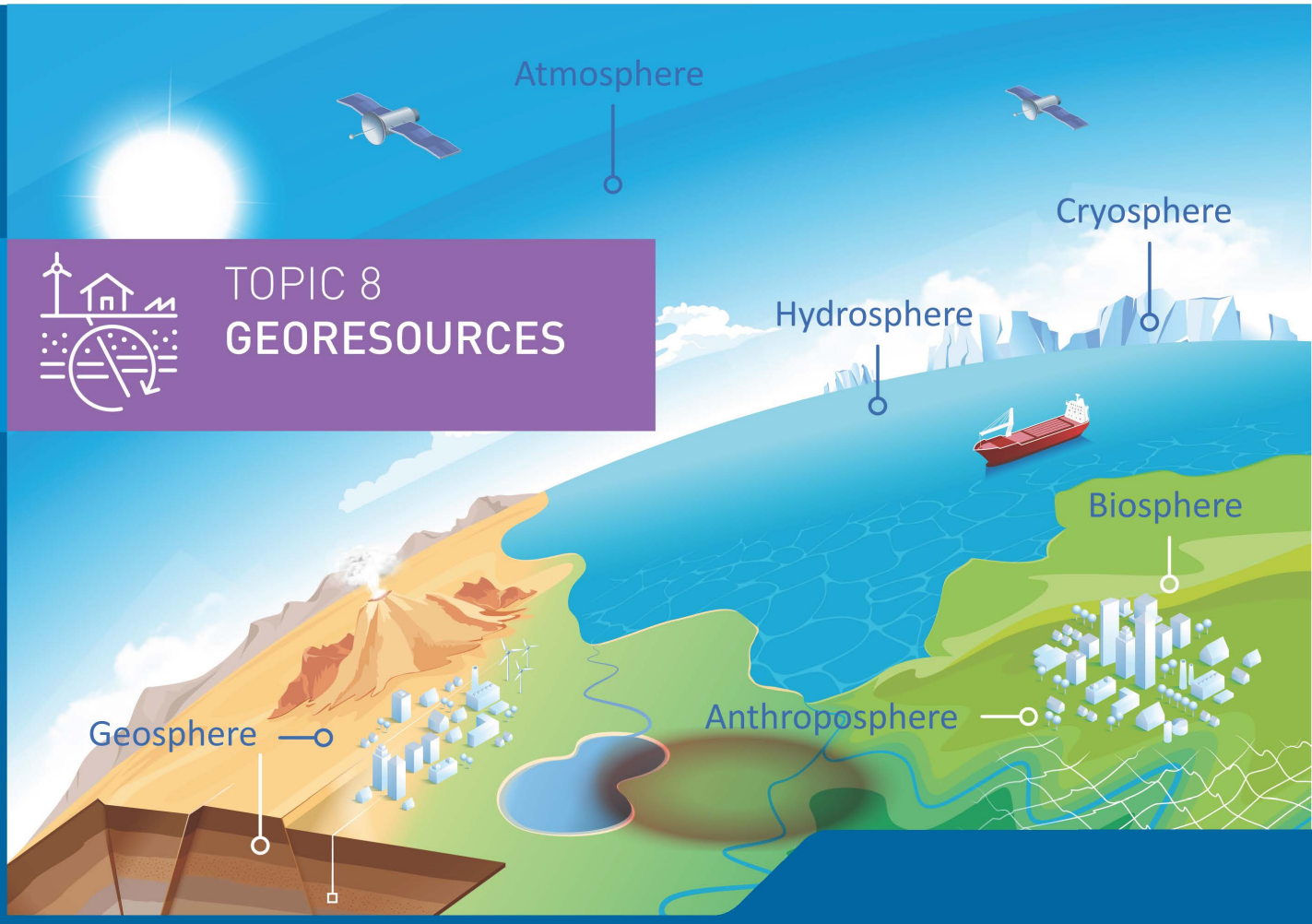
UFZ HELMHOLTZ Centre for Environmental Research



Publications

Helmholtz Centre for Environmental Research – UFZ

Topic 8: Georesources for the Energy Transition and a High-Tech Society

Preface

This list includes all publications of the year 2022 assigned to program topic 8 “Georesources for the Energy Transition and a High-Tech Society” of the Helmholtz research program "Changing Earth – Sustaining our Future" within the research field Earth and Environment which were authored, co-authored or edited by staff members of the Helmholtz Centre for Environmental Research - UFZ.

If a publication belongs to more than one program topic, both primary and secondary assignments are indicated.

The editorial deadline for this publication list was 20 January 2023.

In contrast to external authors, UFZ staff names are highlighted in **bold type** in all publications.

The concluding index lists all UFZ authors in alphabetical order with the sequential numbers of their publications.

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Publications in ISI/Scopus listed journals/series

1. **Altendorf, D.,** Grünewald, H., **Liu, T.-L.,** Dehnert, J., **Trabitzsch, R., Weiß, H.** (2022): Decentralised ventilation efficiency for indoor radon reductions considering different environmental parameters
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2. Cai, W., Wang, F., **Chen, C.-F., Chen, S.,** Liu, J., Ren, Z., **Shao, H.** (2022): Long-term performance evaluation for deep borehole heat exchanger array under different soil thermal properties and system layouts
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3. **Cai, W.,** Wang, F., **Chen, S., Chen, C.,** Zhang, Y., **Kolditz, O., Shao, H.** (2022): Importance of long-term ground-loop temperature variation in performance optimization of Ground Source Heat Pump system
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4. Cai, W., Wang, F., Jiang, J., Wang, Z., Liu, J., **Chen, C.** (2022): Long-term performance evaluation and economic analysis for deep borehole heat exchanger heating system in Weihe Basin
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5. **Chen, C.,** Witte, F., Tuschy, I., **Kolditz, O., Shao, H.** (2022): Parametric optimization and comparative study of an organic Rankine cycle power plant for two-phase geothermal sources
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6. Claret, F., Dauzeres, A., Jacques, D., Sellin, P., Cochepin, B., De Windt, L., **Garibay-Rodriguez, J.,** Govaerts, J., Leupin, O., Mon Lopez, A., Montenegro, L., **Montoya, V.,** Prasianakis, N.I., Samper, J., Talandier, J. (2022): Modelling of the long-term evolution and performance of engineered barrier system
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7. **Dai, S., Korth, B., Schwab, L.,** Aulenta, F., **Vogt, C., Harnisch, F.** (2022): Deciphering the fate of sulfate in one- and two-chamber bioelectrochemical systems
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8. Furui, K., Abe, T., Watanabe, T., **Yoshioka, K.** (2022): Phase-field modeling of wormhole formation and growth in carbonate matrix acidizing
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9. Goto, R., Sakaguchi, K., Parisio, F., **Yoshioka, K.,** Pramudyo, E., Watanabe, N. (2022): Wellbore stability in high-temperature granite under true triaxial stress
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11. **Grunwald, N., Lehmann, C.,** Maßmann, J., Naumov, D., **Kolditz, O.,** Nagel, T. (2022): Non-isothermal two-phase flow in deformable porous media: systematic open-source implementation and verification procedure
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12. Li, J., Zhang, N., Xu, W., Naumov, D., **Fischer, T.,** Chen, Y., Zhuang, D., Nagel, T. (2022):
The influence of cavern length on deformation and barrier integrity around horizontal energy storage salt caverns
Energy **244, Part B** , art. 123148

13. Li, W.-J., **You, T.,** Ni, T., Zhu, Q.-Z., Poh, L.-H. (2022):
The extended peridynamic model for elasto-plastic and/or fracture problems
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14. Li, X., Hofmann, H., **Yoshioka, K.,** Luo, Y., Liang, Y. (2022):
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15. Liu, X., Chen, M., Claramunt, C., Batty, M., Kwan, M.-P., Senousi, A.M., Cheng, T., Strobl, J., Arzu, C., Wilson, J., Bandrova, T., Konecny, M., Torrens, P., Zhang, F., He, L., Wang, J., Ratti, C., **Kolditz, O.,** Klippel, A., Li, S., Lin, H., Lü, G. (2022):
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16. Poonoosamy, J., **Lu, R.,** Lönartz, M.I., Deissmann, G., Bosbach, D., Yang, Y. (2022):
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17. Randow, J., Chen, S., Lubashevsky, K., Thiel, S., Reinhardt, T., **Rink, K.,** Grimm, R., Bucher, A., **Kolditz, O., Shao, H.** (2022):
Modeling neighborhood-scale shallow geothermal energy utilization: a case study in Berlin
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18. **Rink, K., Şen, Ö.O.,** Schwanebeck, M., Hartmann, T., Gasanzade, F., Nordbeck, J., Bauer, S., **Kolditz, O.** (2022):
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19. **Schubert, M., Altendorf, D., Weiß, H.** (2022):
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21. **Vehling, F.,** Hasenclever, J., Rüpke, L. (2022):
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22. Xie, H., **Kolditz, O.,** Rutqvist, J., Zhu, J. (2022):
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24. **Yoshioka, K.,** Sattari, A., Nest, M., Günther, R.-M., Wuttke, F., **Fischer, T.,** Nagel, T. (2022):
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25. Ziefle, G., Cajuhi, T., **Graebling, N.,** Jaeggi, D., **Kolditz, O.,** Kunz, H., Maßmann, J., **Rink, K.** (2022):
Multi-disciplinary investigation of the hydraulic-mechanically driven convergence behavior: CD-A twin niches in the Mont Terri Rock Laboratory during the first year
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26. Zuo, Y., Kong, Y., Jiang, S., **Shao, H.,** Zhu, H., Yang, M. (2022):
Editorial: Progress in exploration, development and utilization of geothermal energy
Front. Earth Sci. **10** , art. 911376

Publications in other journals

27. Bremer, J., Kohl, T., Rudolph, B., Schill, E., Zimmermann, G., Milsch, H., Sass, I., **Rink, K., Shao, H., Kolditz, O.,** Rühaak, W., Schüth, C. (2022):
GeoLaB - das geowissenschaftliche Zukunftsprojekt für Deutschland
bbr : Leitungsbau, Brunnenbau, Geothermie **73** (12), 66 - 71

28. **Garibay-Rodriguez, J., Chen, C., Shao, H., Bilke, L., Kolditz, O., Montoya, V., Lu, R.** (2022):
Computational framework for radionuclide migration assessment in clay rocks
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Reports

29. Bracke, R. (Hrsg.), Huenges, E. (Hrsg.), Acksel, D., Amann, F., Bremer, J., Bruhn, D., Bussmann, G., **Görke, U.-J.,** Grün, G., Hahn, F., Hanßke, A., Kohl, T., **Kolditz, O.,** Regenspurg, S., Reinsch, T., **Rink, K.,** Sass, I., Schill, E., Schneider, C., **Shao, H.,** Teza, D., Thien, L., Utri, M., Will, H. (2022): Roadmap tiefe Geothermie für Deutschland - Handlungsempfehlungen für Politik, Wirtschaft und Wissenschaft für eine erfolgreiche Wärmewende. Strategiepapier von sechs Einrichtungen der Fraunhofer-Gesellschaft und der Helmholtz-Gemeinschaft Fraunhofer-Einrichtung für Energieinfrastrukturen und Geothermie (IEG), Fraunhofer-Institut für Umwelt-, Sicherheits- und Energietechnik (UMSICHT), Fraunhofer-Institut für Bauphysik (IBP), Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum (GFZ), Karlsruher Institut für Technologie (KIT), Helmholtz-Zentrum für Umweltforschung (UFZ) , 21 S.

Conference papers

30. Cai, W., Wang, F., **Chen, C.,** Wang, Z., Jiang, J., **Kolditz, O., Shao, H.** (2022):
Life-span economic and environmental analysis of deep borehole heat exchanger coupled geothermal heat pump heating system with different drilling depths
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Copernicus Publications, p. EGU22-5401

31. **Chen, C.,** Yuan, T., **Lu, R.,** Fischer, C., **Montoya, V., Kolditz, O., Shao, H.** (2022):
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32. **Garibay-Rodriguez, J., Lu, R., Chen, C., Shao, H., Kolditz, O., Montoya, V.** (2022):
Unified computational workflow framework for radionuclide migration assessment in deep geological repositories in clay rock
EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022
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33. **Lu, R.,** Miao, X.-Y., **Kolditz, O., Shao, H.** (2022):
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