Yuankai Yang

Personal

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Institute	Nuclear Waste Management and Reactor Safety (IEK-6) Forschungszentrums Jülich, 52425 Jülich, Germany
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Education

2014.09 – 2019.07 Ph.D **(with honor)**	Department of Engineering Mechanics, Tsinghua University, China Advisor: Prof. Moran Wang
2010.09 – 2014.06 B.S. **(with honor)**	School of Civil Engineering, Chongqing University, China (Ranking: 1/23)

Experiences

Visiting Student, Laboratory for Waste Management, Paul Scherrer Institute, Switzerland, 2017.09 - 2018.03

Visiting researcher, Laboratory for Waste Management, Paul Scherrer Institute, (supported by EURAD Mobility Grant), 2020.08

Honors and awards

2019	Excellent Doctoral Graduate
2018	National Scholarship for Graduate Students
2017	Sijimuge Scholarship
2017	China Scholarship for Graduate Student Overseas Study
2017	Excellent Student Leader
2014	Excellent Graduate of Chongqing University

2014 Excellent Graduate in Chongqing City

Publications

In Journal

7. T. Wu[#], **Y.K. Yang**[#], Z. Wang, Y.H. Tong, M. Wang*. Enhance of anion diffusion caused by the smectite illitization. *Water Resources Research* **56**(11): e2019WR027037, 2020

6. **Y.K. Yang** and M. Wang*. Electrodiffusion of cations in compacted clay: a pore-scale view. *Environmental Science & Technology* **53**: 1976-1984, 2019

5. **Y.K. Yang**, R.A. Patel, S.V. Churakov*, N.I. Prasianakis, G. Kosakowski and M. Wang*, Multiscale modeling of ion diffusion in cement paste: electrical double layer effects. *Cement and Concrete Composites* **96**: 55-65, 2019

4. **Y.K. Yang**, M. Wang*. Pore-scale study of thermal effects on ion diffusion in clay with inhomogeneous surface charge. *Journal of Colloid and Interface Science* **514**: 443-451, 2018

3. **Y.K. Yang**, M. Wang*. Upscaling scheme for long-term ion electrodiffusion in microporous media. *Physical Review E* **96**: 023308, 2017

2. **Y.K. Yang**, M. Wang*. Pore-scale modeling of chloride ion diffusion in cement microstructures. *Cement and Concrete Composites* **85**: 92-104, 2018

1. **Y.K. Yang**, X. He, and M. Wang*. Numerical simulation of Cl^- diffusion in concrete. *Journal of Engineering Thermophysics* **36**(7):1568-1571, 2015 (in Chinese)

In Conference

10. **Y.K. Yang** et al., Representative elementary volume for Opalinus Clay from three-dimensional pore structure and transport analysis. Online. Interpore meeting, 2021 5. Online.

9. **Y.K. Yang** et al., Pore scale modeling of ion diffusion in variably saturated clays. Online. AGU Fall meeting, 2020 12.

8. **Y.K. Yang** et al., Multiscale Modeling of Ion Transport in Cement Paste: Surface Charge Effects. International Symposium on Concrete Modeling. Delft, Netherlands, 2018 8.

7. **Y.K. Yang**, M. Wang*. Multiscale Analysis of Ion Transport in Compacted Bentonite. 7*th* Chinese National Conference on Underground Waste Management. Shanghai, China, 2018 8. (in Chinese)

6. **Y.K. Yang**, M. Wang*. Inhomogeneous Temperature Effect on Ion Transport in Charged Nanochannel. 16*th* International Heat Transfer Conference. Beijing, China, 2018 8.

5. **Y.K. Yang**, M. Wang*. Upscaling Scheme for Long-term Ion Diffusion in Charged Porous Media. 14*th* Chinese National Conference of Porous Flow. Hangzhou, China, 2017 8. (in Chinese)

4. **Y.K. Yang**, X. He, and M. Wang*, Pore-scale Modeling of Ion Transport In Micro/Nano Porous Media. 3*rd* International Conference on Maintenance Science and Technology. Shenzhen, China, 2016 11.

3. **Y.K. Yang**, X. He, M. Wang*. A Mesoscale Simulation of Ion Diffusion in Porous Media. 6*th* Chinese National Conference on Underground Waste Management. Beijing, China, 2016 11. (in Chinese)

2. **Y.K. Yang**, X. He, M. Wang*. Simulation of Unsteady Diffusion of Chloride Ions in Cement. Chinese National Conference of Mechanics 2015. Shanghai, China, 2015 8. (in Chinese)

1. **Y.K. Yang**, X. He, M. Wang*. A Mesoscale Simulation of Ion Diffusion in Concrete. Chinese National Conference of Engineering Thermophysics. Xian, China, 2014 11. (in Chinese)