

## Pulsed corona discharge water treatment

### List of publications

1. Tikker, P., Kornev, I., & Preis, S. (2020). Oxidation energy efficiency in water treatment with gas-phase pulsed corona discharge as a function of spray density. *Journal of Electrostatics*, 106, [103466]. <https://doi.org/10.1016/j.elstat.2020.103466>
2. Onga, L., Kornev, I., & Preis, S. (2020). Oxidation of reactive azo-dyes with pulsed corona discharge: Surface reaction enhancement. *Journal of Electrostatics*, 103, [103420]. <https://doi.org/10.1016/j.elstat.2020.103420>
3. Wang, Y. X., Kornev, I., Wei, C. H., & Preis, S. (2019). Surfactant and non-surfactant radical scavengers in aqueous reactions induced by pulsed corona discharge treatment. *Journal of Electrostatics*, 98, 82-86. <https://doi.org/10.1016/j.elstat.2019.03.001>
4. Kornev, I., Saprykin, F., Lobanova, G., Ushakov, V., & Preis, S. (2018). Spark erosion in a metal spheres bed: Experimental study of the discharge stability and energy efficiency. *Journal of Electrostatics*, 96, 111-118. <https://doi.org/10.1016/j.elstat.2018.10.008>
5. Ajo, P., Kornev, I., Preis, S. Pulsed Corona Discharge Induced Hydroxyl Radical Transfer Through the Gas-Liquid Interface (2017) *Scientific Reports*, 7 (1) DOI: 10.1038/s41598-017-16333-1
6. Kornev, I., Saprykin, F., Preis, S. Stability and energy efficiency of pulsed corona discharge in treatment of dispersed high-conductivity aqueous solutions (2017) *Journal of Electrostatics*, 89, pp. 42-50. DOI: 10.1016/j.elstat.2017.07.001
7. Ajo, P., Krzemyk, E., Preis, S., Kornev, I., Kronberg, L., Louhi-Kultanen, M. Pulsed corona discharge oxidation of aqueous carbamazepine micropollutant (2016) *Environmental Technology (United Kingdom)*, 37 (16), pp. 2072-2081. DOI: 10.1080/09593330.2016.1141236
8. Kornev, I., Preis, S. Aqueous benzene oxidation in low-temperature plasma of pulsed corona discharge(2016) *Journal of Advanced Oxidation Technologies*, 19 (2), pp. 284-289.
9. Kornev, I., Osokin, G., Yavorovsky, N., Morozov, A., Litvinenko, V. Pulsed electric discharge treatment of uranium leaching solutions: A method for accelerated extraction (2016) *Hydrometallurgy*, 162, pp. 37-41. DOI: 10.1016/j.hydromet.2016.02.006
10. Ajo, P., Kornev, I., Preis, S. Pulsed Corona Discharge in Water Treatment: The Effect of Hydrodynamic Conditions on Oxidation Energy Efficiency (2015) *Industrial and Engineering Chemistry Research*, 54 (30), pp. 7452-7458. DOI: 10.1021/acs.iecr.5b01915
11. Kornev, I., Preis, S., Gryaznova, E., Saprykin, F., Khryapov, P., Khaskelberg, M., Yavorovskiy, N. Aqueous dissolved oil fraction removed with pulsed corona discharge (2014) *Industrial and Engineering Chemistry Research*, 53 (17), pp. 7263-7267. DOI: 10.1021/ie403730q
12. Preis, S., Panorel, I., Llauger Coll, S., Kornev, I. Formation of Nitrates in Aqueous Solutions Treated with Pulsed Corona Discharge: The Impact of Organic Pollutants (2014) *Ozone: Science and Engineering*, 36 (1), pp. 94-99. DOI: 10.1080/01919512.2013.836955
13. Panorel, I., Kaijanen, L., Kornev, I., Preis, S., Louhi-Kultanen, M., Sirén, H. Pulsed corona discharge oxidation of aqueous lignin: Decomposition and aldehydes formation (2014) *Environmental Technology (United Kingdom)*, 35 (2), pp. 171-176. DOI: 10.1080/09593330.2013.821144
14. Preis, S., Panorel, I.C., Kornev, I., Hatakka, H., Kallas, J. Pulsed corona discharge: The role of Ozone and hydroxyl radical in aqueous pollutants oxidation(2013) *Water Science and Technology*, 68 (7), pp. 1536-1542. DOI: 10.2166/wst.2013.399
15. Panorel, I., Preis, S., Kornev, I., Hatakka, H., Louhi-Kultanen, M. Oxidation of aqueous pharmaceuticals by pulsed corona discharge (2013) *Environmental Technology (United Kingdom)*, 34 (7), pp. 923-930. DOI: 10.1080/09593330.2012.722691
16. Panorel, I., Preis, S., Kornev, I., Hatakka, H., Louhi-Kultanen, M. Oxidation of Aqueous Paracetamol by Pulsed Corona Discharge (2013) *Ozone: Science and Engineering*, 35 (2), pp. 116-124. DOI: 10.1080/01919512.2013.760415

17. Kornev, I., Osokin, G., Galanov, A., Yavorovskiy, N., Preis, S. Formation of Nitrite- and Nitrate-Ions in Aqueous Solutions Treated with Pulsed Electric Discharges (2013) *Ozone: Science and Engineering*, 35 (1), pp. 22-30. DOI: 10.1080/01919512.2013.720898