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Fourth sampling campaign: Sampling of the Inge pilot plant

Within the scope of the SIGN2 project, membrane modules from the company Inge with a membrane surface of 6 m² were coated by Surflay using the innovative layer-by-layer technology. The coated membrane offers the advantage of higher flux through ultrafiltration membranes combined with increased filtration efficiency due to the LbL coating, which is comparable to nanofiltration. The membranes could not be installed as planned at the location of the pilot plant in the waterworks in Wujiang, which had previously been sampled several times. Nonetheless, in order to test the new membranes on a pilot scale, an alternative location in Germany was selected. Here, the river Ruhr was sampled, which is influenced by the inflow of a PFAS-polluted reservoir and the input of a wastewater treatment plant (for municipal wastewater) in the upstream. The sampling was performed together with colleagues from KIT, IWW, FZ Jülich, TZW-KA, Goethe University Frankfurt and the company Inge. A colleague from the company Inge already carried out the installation and commissioning of the pilot plant the day before the sampling. Thus, a sampling of the feed and the filtrate could be performed on the sampling day without any incidents. Due to the cooperation of numerous project partners, a wide range of hydrochemical, organic and biological parameters can be analyzed and the filtration efficiency of the coated membrane could be optimally assessed.

