

Moving bed biofilm reactor (MBBR) 기반 ANAMMOX 단축질소제거공정 모델링과
kinetic 변수 보정 프로토콜

Tra Nguyen, Usman Safder, Paulina Vilela, Li Qian,
남기전, 오태석¹, 유창규[†]

Kyung Hee University, Applied Environmental Science, Integrated Engineering; ¹부강테크
(ckyo@khu.ac.kr[†])

Targeting the design of novel process, MBBR – based Anammox process is suggested which could create a new highly efficient and compact system for nitrogen removal due to its advantageous design and high-level biological treatment. Simple 1-dimension modeling is developed to analyze the behavior of the MBBR-based Anammox process based on calibrating side-stream anammox data set and parameter calibration protocol. The results analyze unforeseeable performance in treatment process under several operational conditions of biofilm technology, thus enhancing removal efficiency in practical full-scale. **Acknowledgments** This work was supported by the National Research Foundation (NRF) grant funded by the Korean government (MSIT) (No. NRF-2017R1E1A1A03070713), Korea Ministry of Environment (MOE) as Graduate School specialized in Climate Change, and Korea Ministry of Environment as "Prospective green technology innovation project" (2020003160009).