論文 / 著書情報
Article / Book Information

題目(和文)	マイクロ構造された反応空間を用いた光誘起酸化処理の強化
Title(English)	Intensification of photoinduced oxidation processes by using microstructured reaction spaces
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出典(和文)	学位:博士（工学）, 学位授与機関:東京工業大学, 報告番号:甲第9623号, 授与年月日:2014年9月25日, 学位の種別:課程博士, 審査員:吉川　史郎,太田口　和久,Wiwut Tanthapanichakoon,関口　秀俊,日野出　洋文,森　伸介,大川原　真一
Citation(English)	Degree:, Conferring organization: Tokyo Institute of Technology, Report number:甲第9623号, Conferred date:2014/9/25, Degree Type:Course doctor, Examiner:,,,,,,
学位種別(和文)	博士論文
Category(English)	Doctoral Thesis
種別(和文)	要約
Type(English)	Outline

This thesis investigates the application of micro-structured reactor technology to the intensification of photo-induced Advanced Oxidation Processes, particularly photocatalysis. Initially, photolysis and photocatalysis of a model pollutant were investigated in a commercial channel microreactor, where important effects of miniaturisation, such as (i) the feasibility of using low-power light sources while achieving reaction rates orders of magnitude larger than conventional scale photo-reactors, and (ii) the significant contribution of surface phenomena to the performance of the microreactor, were observed. Based upon such findings, two novel micro-structured reactor concepts, for applying with low-cost light sources and sunlight, were proposed and investigated. They were found to exhibit the merits of microreactor at a low cost, while allowing for straightforward scaling-out and adapting to other reaction systems.