マテリアル先端リサーチインフラ利用報告書
ARIM User's Report

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課題データ / Project Data

課題番号 Project Issue Number	24TU0154
利用課題名 Title	生分解性ある複合材料の構造観察
利用した実施機関 Support Institute	東北大学 / Tohoku Univ.
機関外・機関内の利用 External or Internal Use	内部利用（ARIM事業参画者以外）/Internal Use (by non ARIM members)
ARIM半導体基盤PF 関連課題 Related to ARIM-SETI	指定なし / No Designation
横断技術領域 Cross-Technology Area	加工・デバイスプロセス/Nanofabrication 計測・分析/Advanced Characterization
重要技術領域 Important Technology Area	その他/Others
キーワード Keywords	X線回折/ X-ray diffraction

利用者と利用形態 / User and Support Type

利用者名（課題申請者） User Name (Project Applicant)	Rova Lovisa Erika Larsdotter
所属名 Affiliation	東北大学大学院環境科学研究科
共同利用者氏名 Names of Collaborators Excluding Supporters in the Hub and Spoke Institutes	
ARIM実施機関支援担当者 Names of Supporters in the Hub and Spoke Institutes	
利用形態 Support Type	機器利用/Equipment Utilization

利用した主な設備 / Equipment Used in This Project

利用した主な設備 Equipment ID & Name	TU-313：マイクロX線CT

報告書データ / Report

概要（目的・用途・実施内容） Abstract (Aim, Use Applications and Contents)	I use the micro X-ray focus CT scan to analyse the internal structure of my composite material. The sample had been biodegraded in compost for several weeks, and I wanted to test if X-rays could be used to visualize the internal structure before and after biodegradation.
実験 Experimental	I used the micro X-ray focus CT scan on my samples. X-ray was used to get 3D-images of the internal structure of non-biodegraded and partially biodegraded samples.
結果と考察 Results and Discussion	Unfortunately, it was difficult to observe the internal structure clearly. Cracks were formed inside the structure, but they were difficult to visualize clearly. In addition, the composite material was not homogenous, so it was difficult to distinguish inhomogeneities due to the fabrication method, from the cracks/damages which were due to biodegradation. Consequently, for this material, observations of the cross-section using microscope may be a better method for visualizing structural changes.
図・表・数式 Figures, Tables and Equations	
その他・特記事項（参考文献・謝辞等） Remarks(References and Acknowledgements)	

成果発表・成果利用 / Publication and Patents

DOI（論文・プロシーディング） DOI (Publication and Proceedings)	
口頭発表、ポスター発表および、その他の論文 Oral Presentations etc.	
特許出願件数 Number of Patent Applications	0件
特許登録件数 Number of Registered Patents	0件