

M. Goesele, H.P.A. Lensch, J. Lang, C. Fuchs, H.-P. Seidel: DISCO - Acquisition of Translucent Objects. Proc. of SIGGRAPH '04 (Special issue of ACM Transactions on Graphics), 2004, (conditionally accepted).

<http://www.mpi-sb.mpg.de/~goesele/projects/>

概要日本語訳

半透明物体というのは、物体の表面下での拡散反射光の散乱が特徴で、光が入射し異なったサーフェスの位置で光が放出がされます。本論文では、任意の非均質物体におけるこの輸送のふるまいを取得する最初の手法について提案します。

Translucent objects are characterized by diffuse light scattering beneath the object's surface. Light enters and leaves an object at possibly distinct surface locations. This paper presents the first method to acquire this transport behavior for arbitrary inhomogeneous objects. Individual surface points are illuminated in our DISCO measurement facility and the object's impulse response is recorded with a high-dynamic range video camera. The acquired data is resampled into a hierarchical model of the object's light scattering properties. Missing values are consistently interpolated resulting in measurement-based, complete and accurate representations of real translucent objects which can be rendered with various algorithms.