

## **Photo Isomerization modeling of azo-benzene: Light Penetration Profiling**

**Jung-Hoon Yun<sup>1</sup>, \*Maenghyo Cho<sup>1</sup>**

<sup>1</sup>School of Mechanical and Aerospace Engineering, Building 301, Room 1524, Seoul National University, Seoul, Korea  
151-742

\*Corresponding author: mhcho@snu.ac.kr

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In order to predict photo induced deformation of azo-benzene liquid crystal (LC), we calculated time evolutionary light penetration rate in azo-benzene structure. Using quantum calculation method and modified Beer's law, we calculated decay of light intensity according to both time and depth of the structure. We concluded that light penetration rate in azo-benzene is affected by several factors, alignment, density, cis : trans population rate of the azo-benzene, which shows similar data with Statman's experimental data.