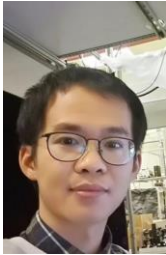

Nonlinear Optical Response of Light in Biological Suspensions

School of Physical Science and Technology, Guangxi University, China

Yi Liang

Email: liangyi@gxu.edu.cn

In recent years, significant progress has been made in creating artificial materials with special optical properties, especially in synthetic soft matter, which has become a key area of interest across various scientific fields. Our study focuses on the optical forces that cause nonlinear effects in colloidal suspensions, including those found in biological systems. Optical forces are crucial for triggering nonlinear responses in these suspensions, challenging the traditional belief that biological materials have low optical nonlinearity. We've observed phenomena like light self-focusing and the creation of soliton-like waveguides in bio-soft matter, highlighting a shift in our understanding. Additionally, we've begun exploring biological waveguiding and sensing, offering potential insights for biomedical applications. This concept opens up exciting avenues for future research and technological advancements, especially in situations where minimal light scattering and deep penetration are essential.



Short Bio:

Yi Liang received his PhD degree in Optics from Nankai University, China. He is an associate professor of Guangxi University, China. Currently, he focuses on light control and its applications. He has published more than 40 papers in journals such as *Light: Science & Applications*, *Optica*, *Nano Letters*, *Physical Review Applied* and so on.