Designing a Graphic and Interactive Web Platform to Promote the Effective Learning of Radiation Biophysics

Project Number: 6000723

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Grant Type: TSG

Abstract:

The multidisciplinary nature of the radiation biophysics course (PHY4274) causes the difficulty for the physics students to understand biology contents as well as the difficulty for the biology students to understand physics contents. To overcome these difficulties, this project aims to design a graphic and interactive web platform to help students quickly grasp the basic biology and physics knowledge needed in this course. The webpage platform will employ graphics and animations to illustrate the essential physical, chemical and biological terms and processes needed in understanding radiation biophysics. Interactive features will be included to encourage students' active thinking. After grasping the knowledge encoded in the platform, students should have no difficulty in understanding this course regardless of their backgrounds.

Academic Publication:

Lu, L., Zhu, H., Yuyuan Lu, An, L., & Dai, L. (2020). Application of the tube model to explain the unexpected decrease in polymer bending energy induced by knot formation. Macromolecules, 53(21), 9443–9448. https://doi.org/10.1021/acs.macromol.0c01436