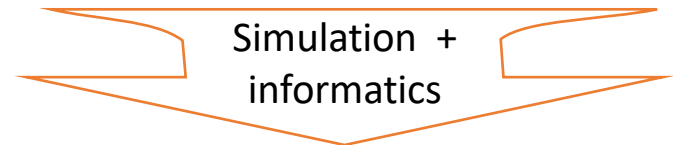
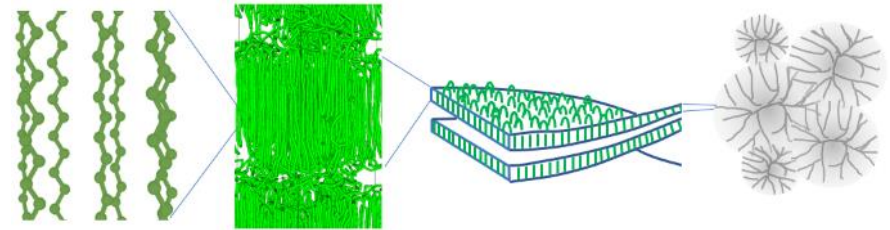


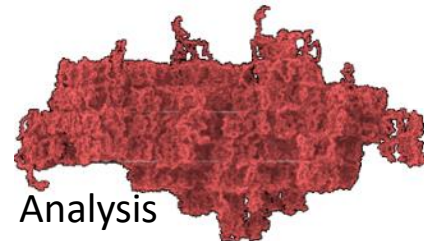
Our group tackle the issues of the marine degradable polymers treated in this project using our advanced technologies of simulation and informatics. Using those technologies, analysis and material designs of marine degradable polymers in multi-scale are performed.

In our group, we studied two kinds of topics of marine degradable polymers; 1) Model study of degradation process of polymer crystals, and 2) Model study of degradation of multi-locked polymer. In first topic, we modeled the polymer crystal structure using coarse-grained technics and performed the degradation process simulations induced by heat with precise analysis of structures based on machine learning. In the latter topic, we made the simulation models of dynamic cross-link elastomer having multi-lock functions and performed the simulations to analyze the detail of dynamic cross-link process. From our simulation and informatics studies, we will try to design the marine degradable polymers having multi-locks.

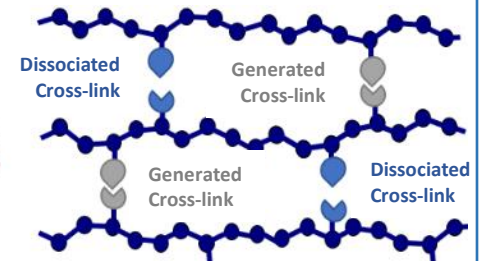
### Hierarchical structures of polymeric materials



### Analysis and material designs of marine degradable polymers.



Analysis of model study of degradation of crystal



Design of multi-lock functions in polymer