

239e Object Descriptive Modeling Environment for Simulations at Nanoscale

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We present a new modeling environment specially designed to perform event-driven simulations of object interactions for nanoscale research. A vendor-neutral and high performance 2D/3D graphics engine based on the OpenGL standard not only opens the possibility to manipulate objects with graphical representations for simulation entities and attributes but also provides a visual outcome for better understanding of the behavior of said entities. The unique developed color recognition technique opens a way of using 3DS objects and/or raw image files such as JPG, GIF, BMP as environmental descriptors. The event-driven, object descriptive approach allows the software use for different research tasks with simple modifications. This developed modeling environment has already been used in the study of linear aggregate formations from CdTe/CdSe nanowires as well as research on diffusive properties of clay nanolayers.