Environmental Chemistry Modeling at LANL: Emphasis on the Global Marine Organic System

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Dr. Elliott will provide a quick history for many types of environmental composition simulation conducted at Los Alamos National Laboratory over the decades. Nuclear furnace, radiological, storage/corrosion, event cloud, miscellaneous defense security, climate/biogeochemistry and planetary atmospheric issues will all be touched upon. But then he will zoom in on several recent examples for which he has close personal experience, paying special attention to dissolved biomacromolecular processing within the surface ocean. This is a personal favorite topic and perhaps the most accessible aspect of his current work. It also happens to be the subject of a student thesis in the Tech Chemistry Department. Dr. Elliott will conclude with another favorite angle that dovetails conveniently into the ocean organics - an application of information theory and related statistical concepts to the inherent construction of large scale chemistry codes. Perhaps unsurprisingly Dr. Elliott concludes that great opportunity lies with the simulation of reduced carbon - everywhere in the galaxy.