



**Figure I.15.** A schematic diagram of processes influencing the mass balance of organic matter and oxygen in the euphotic zone of the ocean. Photosynthesis produces organic matter and oxygen; respiration consumes them. Organic matter escapes via settling of particulate organic matter and mixing or advection of dissolved organic matter (DOM) out of the surface ocean. Oxygen leaves by gas exchange between the atmosphere and ocean and mixing or transport to deeper waters.