1. Record Nr. UNINA9910261134403321 Autore Alysia D. Cox Titolo Deep Carbon in Earth: Early Career Scientist Contributions to the Deep Carbon Observatory Frontiers Media SA, 2017 Pubbl/distr/stampa Descrizione fisica 1 online resource (221 p.) Collana Frontiers Research Topics Soggetti Chemistry Lingua di pubblicazione Inglese Formato Materiale a stampa Livello bibliografico Monografia Sommario/riassunto Since its inception, the Deep Carbon Observatory (DCO) has coalesced a multidisciplinary and international group of researchers focused on understanding and quantifying Earth's deep carbon budget. Carbon is the fourth most abundant element in the universe, and understanding carbon chemistry under a variety of environmental conditions impacts all aspects of planetary sciences, including planet formation, the form and function of planetary interiors, and the origin and diversity of life. DCO recognizes that is integrating and promoting the contributions of early career scientists are integral to the advancement of knowledge regarding the quantities, movements, origins, and forms of Earth's deep carbon through field, experimental, analytical, and computational research. Early career scientists represent the future of deep carbon science and contribute substantially to ongoing research by implementing innovative ideas, challenging traditional working schemes, and bringing a globally interconnected perspective to the scientific community. This research topic highlights the contributions at the forefront of deep carbon research by DCO Early Career Scientist community. The manuscripts of this Frontiers e-volume bear evidence of the rapid advances in deep carbon science, and highlights the

importance of approaching this field from a plethora of different angles integrating disciplines as diverse as mineralogy, geochemistry and microbiology. This integration is fundamental in understanding the movements and transformations of carbon across its deep cycle.