Record Nr. UNINA9910298303003321 Autore Berg Björn Titolo Plant litter: decomposition, humus formation, carbon sequestration // Bjorn Berg, Charles McClaugherty Heidelberg, Germany:,: Springer,, 2014 Pubbl/distr/stampa **ISBN** 3-642-38821-3 Edizione [3rd ed. 2014.] Descrizione fisica 1 online resource (xvii, 315 pages): illustrations Collana Gale eBooks Disciplina 333.7 333.72 570 577 Soggetti Plant litter - Biodegradation Humification Carbon sequestration Soil ecology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Introduction -- Decomposition as a process - some main features --Decomposer organisms -- Initial litter chemical composition --Changes in substrate composition during decomposition -- Chemical constituents as rate regulating: initial variation and changes during decomposition. New and traditional analytical techniques -- Climatic environment -- Decomposition of fine root and woody litter -- Models that describe litter decomposition -- Some possible influences on decomposition pattern, regression model, stable fraction and C sequestration -- Does humus accumulate and where? What factors may influence? Estimating carbon sequestration rates on a regional scale. Sommario/riassunto Since the publication of the 2nd edition, there have been substantial developments in the field of litter decomposition. This fully revised and updated 3rd edition of Plant Litter reflects and discusses new findings and re-evaluates earlier ones in light of recent research and with regard to current areas of investigation. The availability of several long-term studies allows a more in-depth approach to decomposition

patterns and to the later stages of decomposition, as well as to humus

formation and accumulation. The latest information focuses on three fields: (i) the effects of manganese on decomposition and possibly on carbon sequestration, (ii) new findings on decomposition dynamics, and (iii) the new analytical technique using 13C-NMR.