Record Nr. UNINA9910299557003321 Autore Shen Guofeng Titolo Emission Factors of Carbonaceous Particulate Matter and Polycyclic Aromatic Hydrocarbons from Residential Solid Fuel Combustions / / by **Guofeng Shen** Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, Pubbl/distr/stampa 2014 **ISBN** 3-642-39762-X Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (221 p.) Collana Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053 Disciplina 628.532 Soggetti Environmental sciences Air pollution Energy Climate change **Environmental Science and Engineering** Atmospheric Protection/Air Quality Control/Air Pollution Energy, general Climate Change Management and Policy Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia "Doctoral Thesis accepted by College of Urban and Environmental Note generali Sciences, Peking University, Beijing, China." Includes bibliographical references at the end of each chapters. Nota di bibliografia Nota di contenuto Introduction -- Research overview -- Materials and Methods --Emission factors of carbonaceous particulate matter -- Emission factors of parent PAHs -- Emission factors of PAH derivatives -- Field measurement -- Biomass pellet burning -- Conclusion. Emission inventory is basic for the understanding of environmental Sommario/riassunto behaviors and potential effects of compounds, however, current inventories are often associated with relatively high uncertainties. One important reason is the lack of emission factors (EFs), especially for the residential solid fuel combustion in developing countries. In the present study, emission factors of a group of pollutants including particulate

matter, organic carbon, elemental carbon (sometimes known as black carbon) and polycyclic aromatic hydrocarbons were measured for a

variety of residential solid fuels including coal, crop straw, wood, and biomass pellets in rural China. The study provided a large number of emission factors that can be further used in emission estimation. Composition profiles and isomer ratios were investigated and compared so as to be used in source apportionment. In addition, the present study identified and quantified the influence of factors like fuel moisture, volatile matter on emission performance. The publication of the study will be of interest and helpful to the readers in the field of air pollution, human health, fuel saving and energy consumption etc. Guofeng Shen works at the Institute of Atmospheric Sciences, Jiangsu Academy of Environmental Sciences, China.