



## Heavy Metal Bioaccumulation Capability of Woody Plants in Mine wasteland of Karst Areas

Wang Xiuru (1), Huang Zhongliang (1,2), Zhang Xuan (2), and Wu Zijian (2)

(1) school of soil and water conservation, Beijing Forestry University, Beijing, China (wang-xr@163.com), (2) Institute of Biological and Environmental Engineering, Hunan Academy of Forestry, Changsha, China (huangzhongliang523@163.com)

The bioaccumulation capability and transfer characteristics of Pb, Zn, Cu and Cd in soil and 6 different woody plants collected from a typical lead-zinc mine wasteland of Karst area, Hunan province were investigated, including *Cunninghamia lanceolata* (Lamb.) Hook., *Swida wilsoniana* (Wanger.), *Koelreuteria paniculata*, Paulownia., *Cinnamomum camphora* (L.) Presl., and *Sapium sebiferum* (L.) Roxb. The results showed that the 6 plants could adapt to the heavy metal polluted environment, and there was a positive correlation between the heavy metal content in plants and soil. *Swida wilsoniana* (Wanger.) and *Sapium sebiferum* (L.) Roxb. had the largest Pb bioaccumulation factor of 0.03; Paulownia. had the highest Zn bioaccumulation factor of 0.37; the largest Pb transfer factor of 1.31 were found in *Koelreuteria paniculata*; and Zn transfer factor of Paulownia. reached 1.45. These 4 woody plants are suitable for phytoremediation of mine wasteland of Karst areas.