

Factors Affecting Particle Depositions of Electret Filters Used in Residential HVAC System and Indoor Air Cleaner

De-Qiang Chang^{1,2}, Jing-Xian Liu^{1,2}, Sheng-Chieh Chen^{3*}

¹ Filter Test Center, College of Resources and Civil Engineering, Northeastern University, NO. 3-11, Wenhua Road, Heping District, Shenyang, Liaoning 110819, China

² Key Laboratory of Ministry of Education on Safe Mining of Deep Metal Mines, Northeastern University, NO. 3-11, Wenhua Road, Heping District, Shenyang 110819, China

³ Department of Mechanical & Nuclear Engineering, Virginia Commonwealth University, 401 West Main St., Richmond, VA 23284, USA

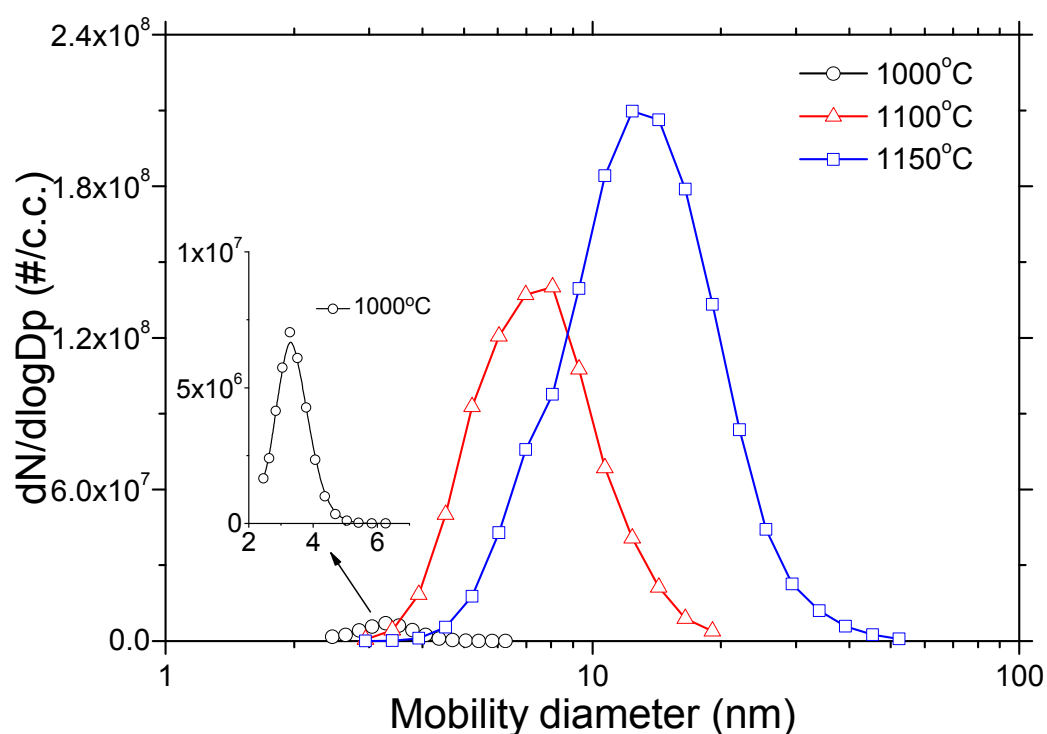


Fig. S1. Size distributions of silver particles generated with different furnace temperatures.

* Corresponding author. Tel.: +1 804 827 0306; Fax: +1 804 827 7030
E-mail address: scchen@vcu.edu

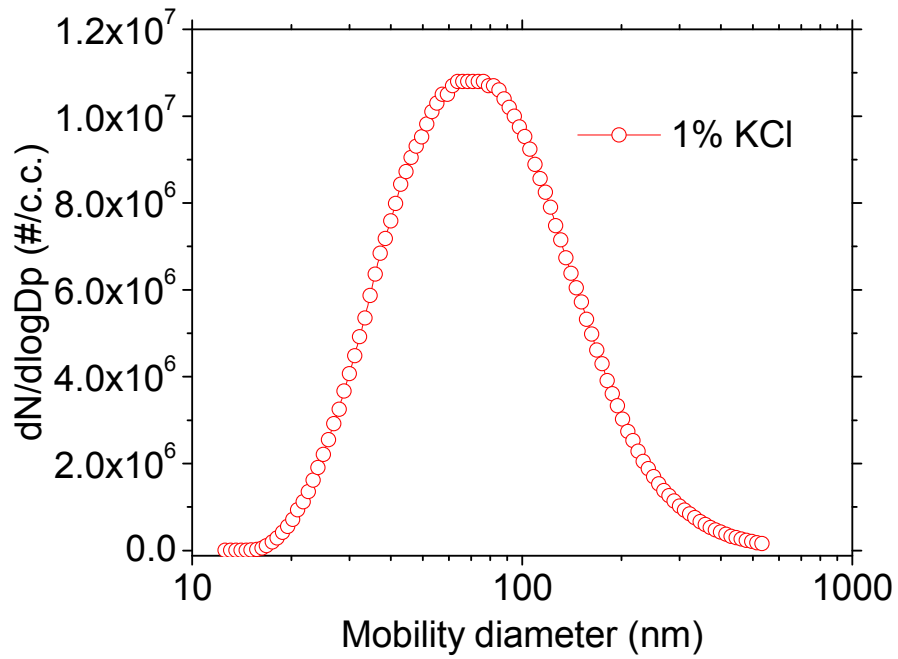


Fig. S2. Size distributions of KCl particles generated with 1% KCl solution.

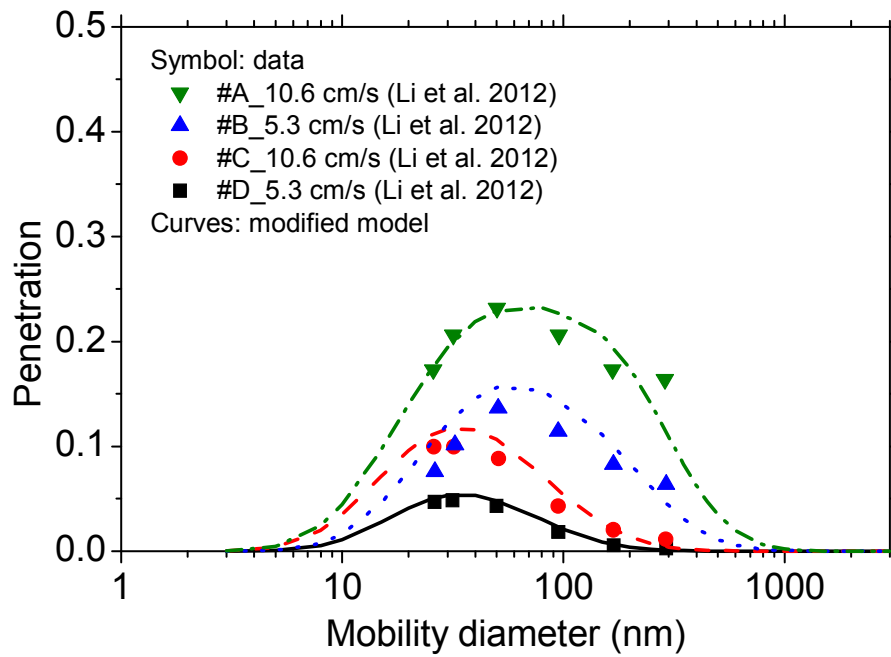


Fig. S3. Comparison of model prediction with experimental data obtained by Li et al. (2012).

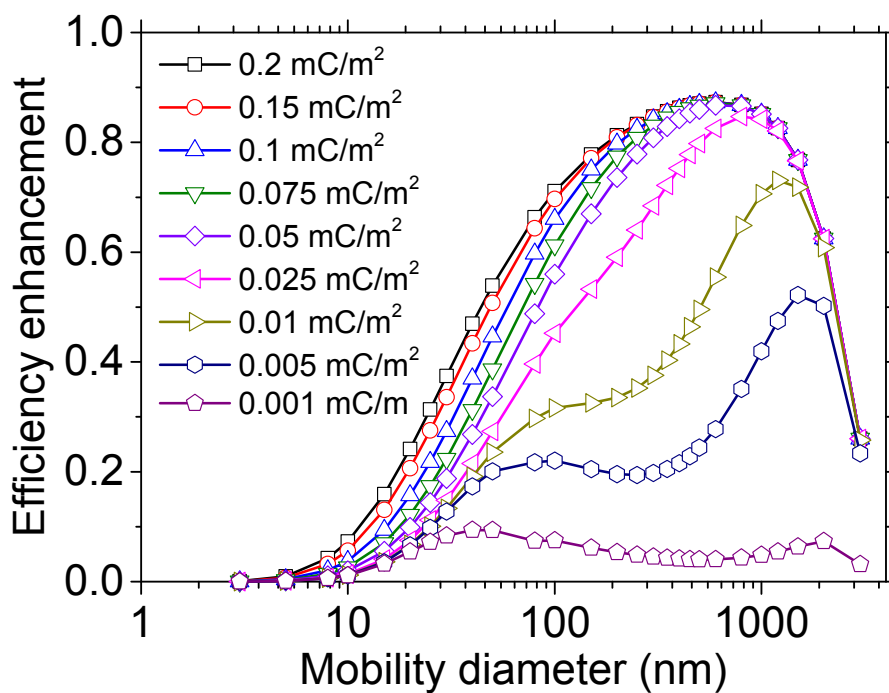


Fig. S4. Efficiency enhancement varied with fiber charge density at face velocity of 0.05 m s^{-1} .

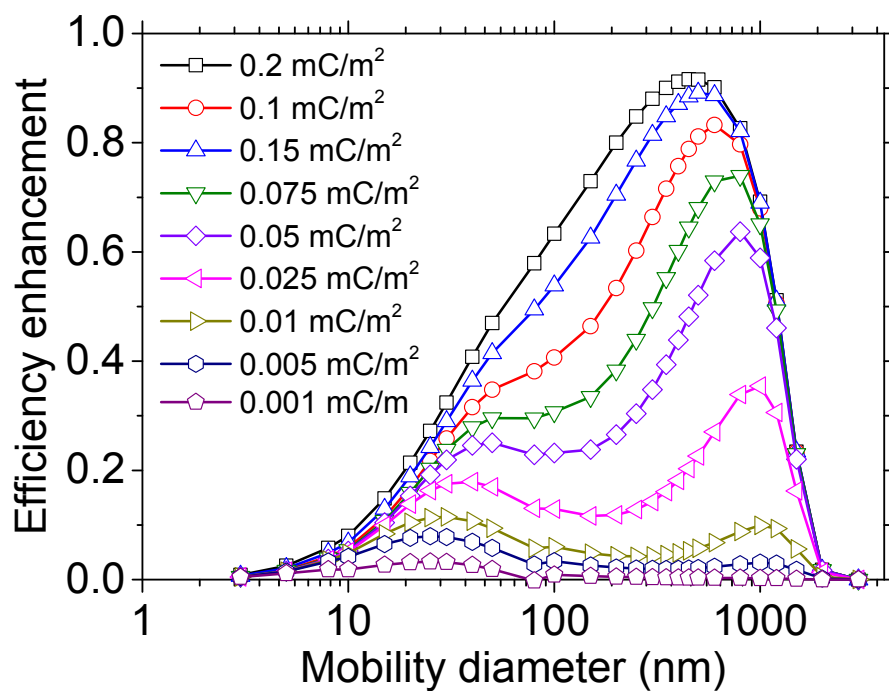


Fig. S5. Efficiency enhancement varied with fiber charge density at face velocity of 1.0 m s^{-1} .

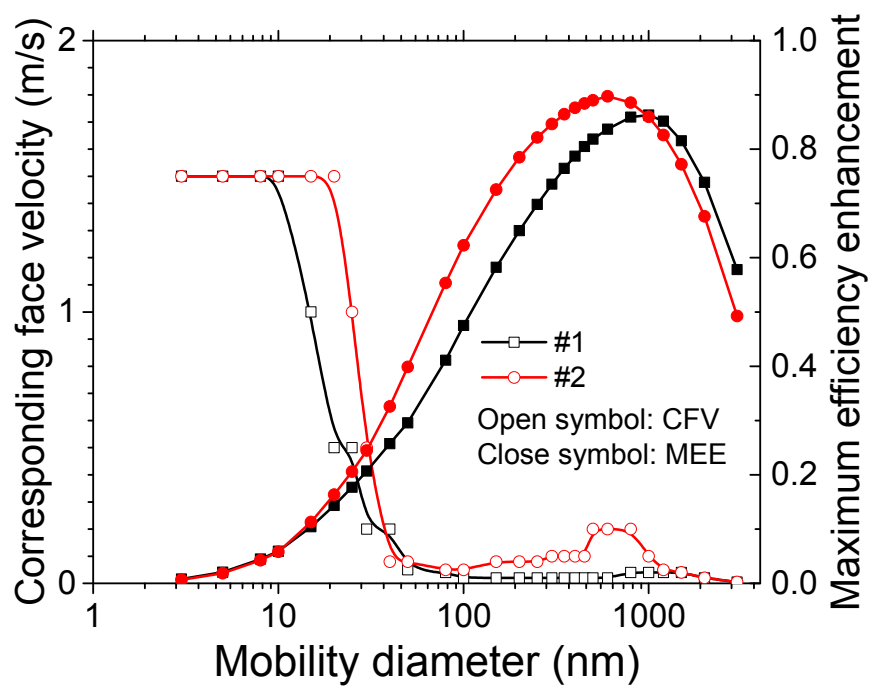


Fig. S6. Maximum charge effect (Maximum efficiency enhancement, MEE) and the corresponding face velocity (CFV) of filter #1 and filter #2.