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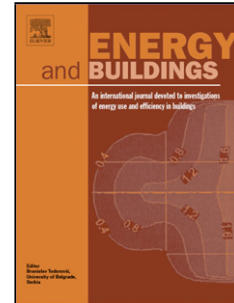
Title: Relationship between Pressure Drop and Face Velocity for Electrospun Nanofiber Filters

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Relationship between Pressure Drop and Face Velocity for Electrospun Nanofiber Filters

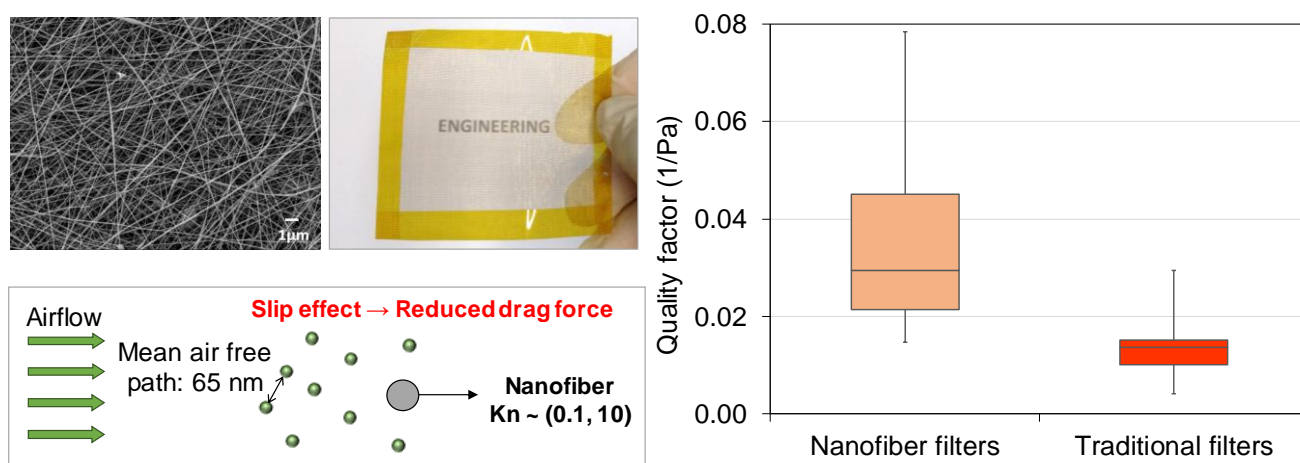
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Graphic Abstract:



Highlights:

- Measured data of pressure drop and face velocity for nanofiber filters were collected.
- Relationship between pressure drop and face velocity was systematically examined.
- Additional tests were conducted for nylon nanofiber filters fabricated in this study.
- The pressure drop was confidently regarded as being proportional to the face velocity.
- Air resistances of nanofiber filters were considerably lower than commercial filters.

Abstract:

Nanofiber filters are typically fabricated using the electrospinning technique, which can reach high particle removal efficiency with relatively low air resistance because of the gas slip effect. They have a great potential for applications in the filtration units of heating, ventilation, and air-conditioning (HVAC) systems to reduce the fan energy consumption. This study systematically examined the relationship between pressure drop and face velocity for

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