



(a) 异向

(b) 同向

图6 异向/同向炭黑分散度图像

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## Numerical Simulation and Experimental Study on Compound Flow and Carbon Black Distribution in Counter-/Co-rotating Twin Rotor Mixer

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**Abstract:** Compound flow and carbon black distribution in counter-/co-rotating twin rotor mixer were numerically simulated and experimentally investigated. The results showed that, the rotating direction of the rotors had a significant effect on carbon black distribution in the compound. Compared with counter-rotation, the distribution capacity of co-rotating twin rotor mixer was lower in the early stage, but slightly better at the end. Numerical simulation could conducted a visual study on the flow and distribution of compound in mixer, which provided a new solution for analog test of rotor performance.

**Key words:** mixer; counter-/co-rotating twin rotor; carbon black distribution; compound flow; numerical simulation

### 一种导电橡胶组合物及其制备方法

中图分类号:TQ333.93 文献标志码:D

由北京中石伟业科技无锡有限公司申请的专利(公开号 CN 106916451A, 公开日期 2017-07-04)“一种导电橡胶组合物及其制备方法”,涉及的导电橡胶组合物配方为:硅橡胶 50~100,

氟橡胶 20~80,导电填料 100~400,硅烷偶联剂 3~15,硫化剂 0.5~4。其中硅橡胶为甲基硅橡胶、乙烯基硅橡胶和苯基硅橡胶中的1种或多种,导电填料为石墨、银粉、银包铝等中的1种或多种。该导电橡胶组合物可同时具备耐高低温性能以及优异的耐油和耐溶剂性能。

(本刊编辑部 赵敏)