

The effects of surface fluorination of acetylene black (AB) in the dispersed slurry

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ABSTRACT

Carbon materials have been used as conductive additives for various non-conductive materials due to their high conductivity. And it is important to disperse them in composite things. Surface treatment of carbon materials with fluorine (F_2) gas has attracted much attention because it can improve dispersion stability and fluidity of carbon materials. Among carbon materials, acetylene black (AB) is difficult to control the reaction with fluorine gas, and there are many problems such as non-uniform reaction and combustion of the material due to CF_4 gas generation. In this study, we performed surface fluorination of acetylene black particles using F_2 gas, and discussed the effects on dispersion stability, flowability, and electrochemical properties as a conducting materials for lithium-ion batteries.

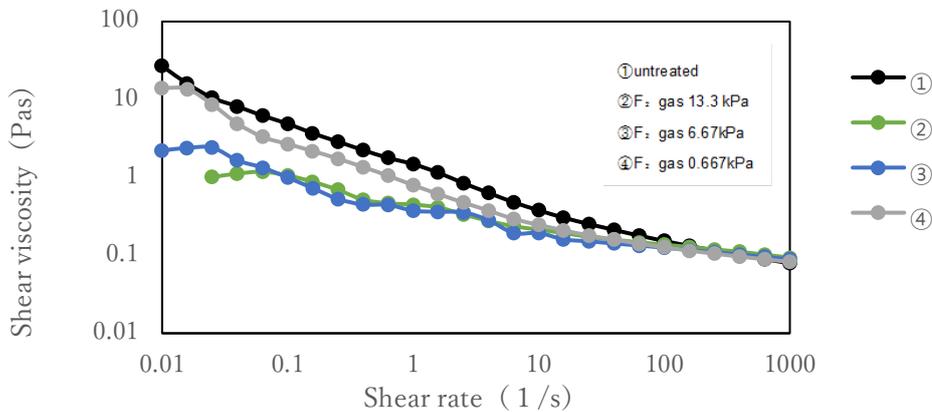


Fig1. Shear rate dependence of shear flow viscosity in
N-Methyl-2-Pyrrolidone organic solvents

REFERENCES

Takatoshi Kimura and Masahiko Nakamura (1990) “Time Dependence of Rheological Properties and Particle Aggregation Structure of Fine Particles in a Slurry” , *Journal of the Society of Powder*, **27(9)**, 597-602.

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