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Effect of Solvents and Solution Chemistry on the Properties of Perovskite Solar Cells

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Message from the Guest Editors

Dear Colleagues,

Despite the relatively short history of perovskite solar cells (PSCs), their power conversion efficiencies (PCEs) have steadily increased, reaching over 25%. However, among a range of fabrication methods for PSCs, the use of organic solvents in each layer is still limited. N,N-Dimethylformamide and Dimethyl sulfoxide are the most commonly used solvents for the perovskite precursor, while chlorobenzene is frequently used in both the electron transport and hole transport layers. Recently, new solvents such as N-methylpyrrolidone and trichloroethane have been explored, demonstrating superior PCEs compared to conventional solvents. Nonetheless, the precise optimization conditions and working mechanisms of these diverse organic solvents in PSCs remain unclear.

This Special Issue is focused on investigating the effect of solvent and solution chemistry on the properties of perovskite solar cells. We cordially invite you to submit your original research articles and reviews to this Special Issue.

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Message from the Editor-in-Chief

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