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Green synthesis of heterocyclic compounds and asymmetric organocatalysis

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This presentation highlights our recent effort on the development of fluorous chemistry based pot-economic synthesis and asymmetric catalysis to maximize reaction and separation efficiency in the synthesis of diverse heterocyclic scaffolds with substitution, skeleton, and stereochemistry variations. Fluorous recyclable organocatalyst-promoted cascade reactions have been introduced for asymmetric fluorination, Michael addition, Mannich reaction, Robinson annulation and other transformations to construct drug-like molecules with multiple stereocenters. Screening of compounds for druggable targets such bromodomains, kinases, RORγt, and HIV-1 will be mentioned.

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