END TO END PLATFORM TO MANAGE CIRCULAR ECONOMY OF WASTE MATERIALS

ABSTRACT

Systems and methods for managing chemical recycling processes include accessing characterization data of a feedstock, the characterization data comprising one or more spectra collected according to one or more spectroscopic methods. The methods include predicting, using the characterization data, a set of constituent materials included in the feedstock. The methods include predicting a material composition of the feedstock using the predicted set of constituent materials. The methods include identifying, at least in part using the predicted material composition of the feedstock, one or more target products. The methods include generating a set of chemical reaction schemas enabling a conversion of at least part of the feedstock into the one or more target products. The methods also include storing identifications of the material composition of the feedstock, the one or more target products, and the set of chemical reaction schemas in a data store.

Figure 5