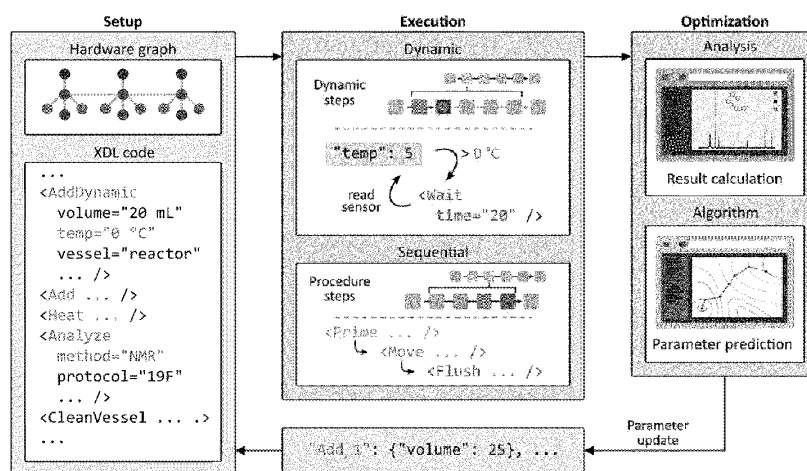




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(54) **Title:** CHEMICAL SYNTHESIS OPTIMISER

Figure 1



(57) **Abstract:** The present invention relates to a method of optimising an instruction set for a chemical synthesis and a chemical synthesiser for use in a method of optimising an instruction set for a chemical synthesis. The method comprises (i) performing a chemical synthesis in a reaction vessel of a chemical synthesiser operating according to an instruction set to produce a reaction product, (ii) recording reaction data using an analytical unit of the synthesiser during the chemical synthesis and/or recording product data on the reaction product, (iii) analysing the reaction data and/or product data using a control unit of the chemical synthesiser to determine a characteristic of the synthesis; and (iv) adjusting one or more reaction parameters of the instruction set, to provide an adjusted instruction set, based on a prediction that the adjustment will improve the characteristic of the synthesis.

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