Chemical Programming: Models, Concepts, and Designs

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1 Introduction

Chemical Programming is a paradigm of programming that is modeled after the mechanics of chemical reactions. This style focuses on utilizing the features of chemical components, such as atoms, elements, compounds and reactions. The intention of this programming paradigm is to allow the functionality and mechanisms in chemical processes to be applied to computational values. Chemical computation permits highly customizable abstraction over traditional types like booleans, integers, and strings.

Purely modeling chemical reactions is not the goal, rather defining and modeling the components of chemistry to make them useful in a program.