Review of: "Annihilation-free chemical theory of subatomic particles"

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Potential competing interests: No potential competing interests to declare.

In physics our understanding of Nature is synthesized in theoretical models that have two essential components: a framework and a specific model. For instance, in understanding Nature at the most fundamental level we employ quantum field theory (QFT) as framework and the standard model (SM) of particle interactions as model, both with well defined mathematical rules. Of course, there is no guarantee that either of these represent the end of our understanding, yet we know that the QFT of the SM is highly consistent and predictive quantitatively. There are numerous examples of measurements and computations with agreement between the two at a high level of accuracy. We are aware of only a handful of observations that cannot be interpreted within the SM. Any new framework or model must be at least similarly predictive.

In this manuscript the goal of the authors is unclear. If they aimed at introducing a new framework -- like string theory was developed to replace QFT at the most fundamental level in an attempt to unify gravity with quantum mechanics --, the mathematics is completely undefined. Hence, the reader can only guess that they do not intend to introduce a new framework, but simply a new model that falls into the category of algebraic models of particles, similar to the quark model of hadrons by Gell-Mann. However, while Gell-Mann had complelling observational reasons to introduce the quark model, here the observational motivation is unclear. All processes discussed in the paper are well understood quantitatively within the SM, and the authors do not present any explanation to observed phenomena that requires physics beyond the SM. In any case if it is meant a new model within QFT, the new fields and their Lagrangian density must be defined precisely, which is absent in this manuscript. Consequently, the model is undefined and cannot be tested quantitatively.

Given that the authors do not use the commonly accepted language of current particle physics as explained above, it is not possible to provide a fair assessment whether or not the manuscript contains any interesting new ideas to understand the laws of the microworld.