Abstract Submitted
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A Moebius-Strip Representation of the Matrix-Product Periodic System of Diatomic Molecules[1] RAY HEFFERLIN, Southern Adventist University — Periodic systems of diatomic and triatomic molecules are well tested and documented [1]. The 3D form of the diatomic system consists of blocks, each having all molecules with two fixed-row atoms, on which the molecules are addressed by their atomic group numbers. The blocks can be replaced by tori [2], but in either case many redundancies exist (e.g., CO and OC). The tori [3] may be replaced by Moebius strips [4] which remove the redundancies. This representation of the periodic system will be presented. [1] Hefferlin, R., "The Periodic Systems of Molecules, Presuppositions, Problems, and Prospects," Baird, D., Scerri, E., and McIntyre, L., Editors, *Philosophy of Chemistry, Boston Studies in the Philosophy of Science*, Springer, Dodrecht, the Netherlands, 2006. [2] Hefferlin, R,. "Matrix-Product Periodic Systems of Molecules," J. Chem. Inf. Comput. Sci, 34, 314-317 (1994). [3] Hall, D. E, "Quantitative Evaluation of Musical Scale Tunings," AJP, 42, 543-552 (1974). [4] Blau, S. K., "Good Music unfolds in Small Steps," Physics Today, October 2006, pp. 19-21.

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