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Moshe Cohen* (cohenm10@macs.biu.ac.il), Department of Mathematics, Bar-Ilan University, 52900 Ramat Gan, Israel. *A perfect matching model for knot homology theories*. Preliminary report.

Spanning tree models for knot homology theories (including those of Greene, Roberts, and Baldwin and Levine) have combinatorial generators but more complicated differentials that need to pass through non-spanning-tree resolutions. Using the dimer model studied previously by this author, the differential can now be realized as a combinatorial object, as well, and thus can be better understood. Preliminary results are discussed. (Received August 23, 2012)