1056-57-1573   **Moshe Cohen*** (`moshe@math.lsu.edu`), Department of Mathematics, Louisiana State University, 303 Lockett Hall, Baton Rouge, LA 70803, and **Oliver Dasbach** and **Heather M. Russell**. *New twisted dimer model for the twisted Alexander polynomial.* Preliminary report.

One can "twist" the Alexander polynomial by incorporating information coming from representations of the fundamental group of a link complement. One familiar representation is encoded by knot colorings. We generalize the dimer model for the Alexander polynomial to a twisted version with a more complicated structure and discuss properties of the polynomials that arise in this context. (Received September 22, 2009)