1041-92-157 **Dorothy Buck*** (d.buck@imperial.ac.uk), Dept of Mathematics, Imperial College London, London, SW7 2AZ, England, and **Erica Flapan**. *Predicting Knot or Link Type of Site-Specific Recombination Products.*

Site-specific recombination on supercoiled circular DNA yields a variety of knotted or linked products. Here, we present a topological model of this process and characterize all possible products of the most common substrates: unknots, unlinks, and torus knots and catenanes. This model tightly prescribes the knot or link type of previously uncharacterized data. We also discuss how the model helps to distinguish products of distributive recombination and, in some cases, determine the order of processive recombination products. This is joint work with Erica Flapan. (Received August 09, 2008)