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Kirillov-Reshetikhin (KR) crystals are colored directed graphs encoding the structure of certain finite-dimensional representations of affine Lie algebras. In recent work S. Naito, D. Sagaki, A. Schilling, and M. Shimozono, I gave a uniform realization of a tensor product of (column shape) KR crystals, for all untwisted affine types, in terms of the so-called quantum alcove model. I will present my work with A. Lubovsky on using the mentioned model to realize the combinatorial  $R$ -matrix, i.e., the unique affine crystal isomorphism permuting factors in a tensor product of KR crystals. As in type  $A$  the combinatorial  $R$ -matrix is realized by Schützenberger’s sliding game (jeu de taquin) on Young tableaux, our algorithm generalizes the type  $A$  one. (Received August 18, 2014)