1056-16-857   **Aaron D Lauda*** (`lauda@math.columbia.edu`), Department of Mathematics, 2990 Broadway, New York, NY 10027. *Categorifying quantum groups.*

I will explain joint work with Mikhail Khovanov on a categorification of the quantum deformation of the "lower-triangular" subalgebra of a symmetrizable Kac-Moody algebra. This categorification is defined using categories of graded modules over an algebra that is diagrammatically defined using a graphical calculus. I will also survey some recent results and applications of these algebras. (Received September 18, 2009)