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Constructing quantized enveloping algebras via finite dimensional algebras. Preliminary report.

Certain finite dimensional algebras known as generalized q -Schur algebras ("Schur algebras" for short) may be defined by generators and relations found in previous work. Taking those generators and relations as a starting point, one can find cellular bases for the Schur algebras and thus prove their quasi-heredity directly. Furthermore, the Schur algebras fit together into an inverse system and one can locate the quantized enveloping algebras within the inverse limit. The framework also seems to produce the small quantum group in a natural way, when specialized at a root of unity. (Received August 09, 2010)