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Mikhail V Kotchetov* (mikhail@mun.ca), Department of Mathematics and Statistics,
Memorial University of Newfoundland, St. John's, NL A1C 5S7, Canada. *Group gradings on Lie
algebras in positive characteristic.*

We are interested in describing all group gradings on simple Lie algebras over an algebraically closed field F , i.e., all vector space decompositions of the form $L = \bigoplus_{g \in G} L_g$ where L is a simple Lie algebra, G is a group, and $[L_g, L_h] \subset L_{gh}$. In the case $\text{char} F = 0$, all gradings on the simple Lie algebras of the series A , B , C and D have been classified. Essentially the same classification is valid for these Lie algebras in the case $\text{char} F = p > 2$. In this talk we will discuss recent progress in the classification of gradings on simple Lie algebras of Cartan type in characteristic p .

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