Spin-dependent electronic transport through magnetic molecules\footnote{Supported by the KU Center for Research and the German Science Foundation through Sfb 658} CARSTEN TIMM, University of Kansas, FLORIAN ELSTE, Freie Universitaet Berlin — Electronic transport through magnetic molecules has recently received considerable attention. This is partly motivated by the idea to integrate spintronics with molecular electronics. This talk highlights a number of interesting effects we predict for tunneling through single magnetic molecules and molecular monolayers weakly coupled to metallic leads. The results are obtained in a rate-equation approach which treats the intra-molecular interactions exactly and works also for situations far from equilibrium (large bias voltage). Effects to be discussed include fingerprints of magnetic excitations seen in inelastic tunneling beyond the sequential-tunneling approximation, very slow spin relaxation, giant spin amplification, and negative differential conductance at high temperatures.