Total Synthesis of Isochrysohermidin

Significance: In 1993, Boger and Baldino described a concise synthesis of isochrysohermidin, a 2-oxo-3-pyrroline dimer first isolated from Mercurialis leiocarpa. Through their synthetic efforts, they were able to show the interstrand DNA cross-linking capabilities of isochrysohermidin.

Comment: C is accessed from A by an inverse-electron-demand Diels–Alder cycloaddition with B and is further elaborated to D by reductive ring contraction. meso- and d,l-isochrysohermidin are obtained by a singlet oxygen cycloaddition, followed by in situ decarboxylation.