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CHEMISTRY OF CARBON–NITROGEN MULTIPLE BONDS. THE USEFUL SYNTHON CF_2=NBr

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Improvements in the synthesis of N-bromo-difluoromethanimine, CF2=NBr, will be described along with some reaction chemistry. The imine undergoes thermal addition with a variety of olefins, leading to the simple addition product and to the formation of telomers. Photolysis with CO forms the isocyanate $BrCF_2N{=}C{=}O$, in high yield. Pyrolysis of CF_2=NBr at ~ 450°C gives high yields of tetrafluoro-2,3-diaza-1,3-butadiene, $CF_2{=}N{-}N{=}CF_2$, making this compound readily available for the first time. Some new reaction chemistry of the diene will be discussed.