

# A Novel Pathway to Imidazo[1,2-*a*]pyridines. Access through Imino Pyridinium Salts

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A new synthetic strategy for the preparation of imidazo[1,2-*a*]pyridines **10** is reported, which is based on the electrocyclization reaction of imino pyridinium salts **7** upon treatment with a strong base. The starting materials are easily prepared from 2-aminopyridine (**3**) by imine condensation and subsequent alkylation at the pyridine nitrogen atom. The ring closure reaction of the zwitterionic intermediate **8** to give a five-membered ring proceeds in low yield forming first the dihydro compound **9**, which under the reaction conditions is transformed into the corresponding aromatic compounds **10** and **11** by air oxidation. The mechanism of the electrocyclization reaction is interpreted in detail by quantum-chemical calculations.

*Key words:* Imines, Pyridinium Salts, Electrocyclization, Imidazo[1,2-*a*]pyridines,  
Quantum-chemical Calculations