Electrochemical oxidation of amides of type $Ph_2CHCONHAr$

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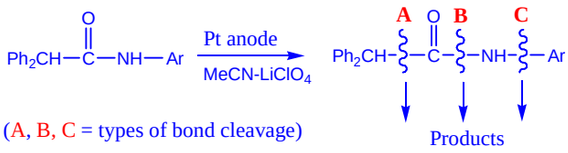
Anodic oxidation of N-aryl-2,2-diphenylacetamides in acetonitrile undergo two major types of bond-cleavage, one between the benzylic carbon and the carbonyl group, and the other between the 'N' atom and aryl group [1], as illustrated below:



(A, B, C = types of bond cleavage)

The selectivity of the cleavage and nature of emerged products is highly dependent on the nature of substituent attached to the aryl group. The type of products obtained and the mechanism involved will be discussed.

References

[1] Golub, T.; Becker, J.Y. *Org. Biomol. Chem.*, **2012**, 10, 3906.