Electropolymerization Of Aniline From Ionic Liquids

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Electrochemical polymerization of aniline (AN) can be accomplished in room temperature ionic liquids (IL), such as 1-benzyl-3-methyl immidazolium tetrafluoroborate (BMITFB) in the presence of small amounts of water. Since BMITFB is a pH-neutral salt the electropolymerization of AN should not proceed because non-protonated PANI is not conducting. We found that small, but controlled amounts of water promote a facile electropolymerization yielding a compact PANI film. On the other hand polymerization of AN in predominantly aqueous solution containing low concentration of BMITFB, yields PANI films of rough, powdery morphology. Different polymerization conditions results in PANI of different molecular weight.