5DFKHO &HOODOVRQRI
)DFXOWHQWRQ 7DNHPDWVX
)XQGHG&RE WWUHOO

3KRWRSURFHVVHV RI SKWKRO LQ LPLGD]RLXP VD

3KRWRDFLGV DUH PROHFXOHV WKDW EHFRPH PRUH DFLGLF XSRQ H[FLWDW VWDWH SURWRQ WKHUHDQKDYHU E XVHG LQ YDULRXV PDWHULDO GXH WR WKHLU DELOLW\ WR FRQWUR7KHSHQKDQFHG DFLG KDV EHHQ DWWULEXWHG WR UHGLVXWUL RQ LQ WKH H[FLWH SKRWRDFLGLW\ FDQ EH HQKD

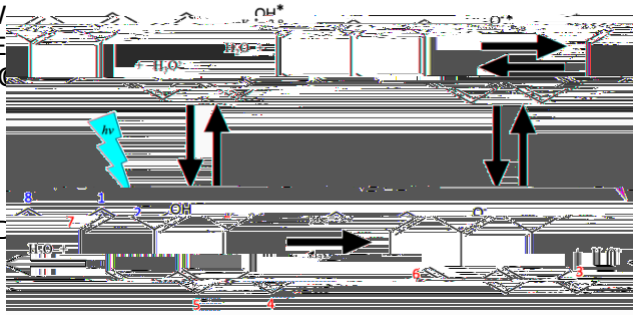

Figure 1. ESPT process of the photoacid 2-naphthol (2OH) in water. There is only one protic site on 2OH. Thus, upon excitation, 2OH can either relax back to the ground sta deprotonate. The carbons of 2OH in the ground state is numbered according to naming conventions.

‘ a"ëñ ñ v ID

WKDW KDV EHHQ VKRZQ WR XQ

SDWKZD\V DW HRLW &+ U VLWKH 1G+H
RQ WKH VROYHQW HQYLURQPHQW &RQVLGHULQJ PHWFKDWQ LFVKDULQHWUHGGXVF
FKDUJHG VROYHQW VXFK DV LRQLF OLTXLGV ,/ FRXOG IXUWKHU LPSD

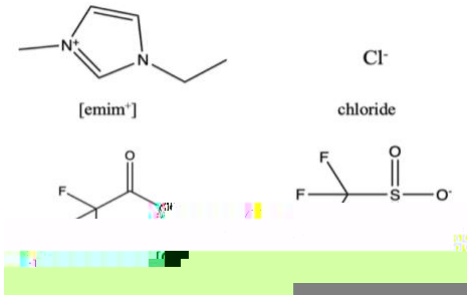

Figure 2. Proposed ions for ionic liquids; [emim+], [Cl-], [TFA-], and [OtF-].

VROYHQWV VXFK DV ,/V 6WXGLHV RI UHYHDO VHGH FVLUWH (637 DV FDWLRQLF 1 2+ RQO (637 DW WKH 2+ VLWH 7KH VWUXFWXUDO GHS SKRWRFKHPLVWUL RI 2+G XVLQJ WKH IROORZ

HWK\OH WK\OLPLGD]RO &O DX G &+ DPLUR LQ DQLRQV

FRPELQDWLRQV &&RUR &FHDQG &H >7)$

WULIOXRURPHWKDQH 7KH IRQLF &&RUR &FHDQG &H &&RUR &FHDQG &H &&RUR &FHDQG &H