

3K\VLFD0 3URSHUWLHV RI )LEHU 5HLQIRUFHG &RPS  
\*UDSKHQH 1DQRIODNHV

6SHDNHUBPDJ\$QPDWXOX  
3URIHVVRUSDWPHQW RI 0HFKDQLF\$OW(QJLQHHULQJ8QLYHUV

0( \*UDGXDWH 6HPLQDU SP -%  
\$EVWUDFW



5HFHQWGXKBYH EHHQ FRQWLQXRXMOEHLQFUHLQVROJ  
FRPSRVLWHBDMWURDQYLQJ PHFKDQLFDO HOHFWULFD  
SURSHUWLBUH7KRQVW6HEHGWKH QH[W JHQBOGWLRQ  
VWURQUHEDDQGWZVQGELDHWHU FDUV DQG VWURQJHU  
VWUXFWXUDO D@PUD@UX

UHLQIRUFHG FRPSRVL  
WR GHWHUPLQH\$WKLSDRSLTQEMKH SUHVHDSKHHQH  
QDQRIODDQGV WR WDNH DGYDQWDJH RI WKHVH SURS  
DGYDQFHPHQW LQ WKSUHMHWQGRZQLOVOKLWDONKHDERXW  
PHFKDQLFDO WKHUPDO DQG HOHFWULFDO SORSHULWLHPPBRVIDW  
LQFRUSRUDWHG ZLWK J\$QSKHQBLLIQHUXWLQV

VLJQLILFHDQWOW IURP WKH SUHVGHQWHOW\$GLHZ/ DQGINJFWLWHLQJ SU  
JUDSKDQGIUEHROFHG FRPSRVLWHV

'U 5DPDJDQ \$VPDWXOX\$KUHFGHYURBPKWKH 'HSDUWPHQW RI 0DWHU  
DQG (QJLQHHULQJ DW 9LUJLQLD 7HFK LQ DQG KDG SRVWGR  
&RQQHFWLFXW DQG <DOH 8QLYHUVLWRI 0HFKDQLFDO W\$HLQHSU  
:LFKLWD 6WDWH 8QLYHUVLW\ DV DQ DVVLVWDQW SURIHVVRU LQ  
LQ DQG IXOO SURIHVVRU LQ +LQ WKLUMDQWUHGHVSDWWRPQ  
RQ WKKHURUHWLFDQ DQGHISVWDRQGPQDFRQVWDO SURSHUWLHV F  
QDQRPDWHULDOV FRPSRVLWH PDWHULDOV DQG ELRPDWHULDO  
ELRPHGLFDO D\$SORKDWLQV VVWXGLHV KHM R\$VQDCE\$IDSKHUG/ DQG  
FRQIHUHGFH SURFHGLQJV HGLWHEGR\$WKFKBSEVRUNW DQGWKRUB  
PDQXDOV UHSDWYHGWV DQG KRQRUV DZSUHGWHSUHWLHROWHGFK  
PDQ\ LQWHUQDWLRDQGBRQLHJHDFHV"1 h=PDQXD@ZHQFHV ‡

XQGHU KLV VXSHUYLVLRQ DQG VWDUWHG ZRUNLQJ LQ3GLIIHUHQ  
PRUH WKDQ RI LQWHUQDQYDQGHQWHLFQDQHG DQRPV GLIIHU  
7R GDWH KLV VFKRODUO\ DFWLYLWLHWLPHH BHFQWBRQDQWRRWK  
6FKRODU