6 X V V H [(3 6 5 &   'F
/ D Q G V F D S H   3 U F
7 K H P H V   I R U $ X\

Engineering and

&KHPLV\

(QJLQHH

,QIRUPD

0DWKHP

3K\VLFV

Chemistry

7KHRUHWLFDO DQG ([SHULPHQWDO 0RO

1RYHO LPDJLQJ DJHQWV WR GHWHFW D

(3

3KRVSKROGHUHQLYHG PDFURF\FOHV 7RZDUG

FRPSRQHQWV (3

1HZ TXDQWXP PHWKRGV FDSDE SDHUMLVFR

6FKU|GLQJHU HTXDWLRQ IRU TXDQWXP

(3

'HYHORSLQJ WKH UHDFWLYLW\ RI KLJKC

RUJDQRPHWDOOLF FRPSRXQGV PRROHFXODUHRDFWLY

XVLQJ UHDJHQWV IRU GHOHWLQJ DWPRV

(3

1RYHO /LQNHURORJ\ 7RZDUGV +HWHURE

3URWDFV DQG $QWLERG\ 'UXJ &RQMXJD

'DW G ULYHQ GH FN LV Q R Q VWUDWHJLHV IRU U

6LJQDO SURFHVVLQJ IRU ZLUHOHVV FRP

FRPPXQLFDWLRQ SDUDGLJPV (3

$ S S O L F D W L R Q V   R I   + X P D Q $ F W L Y L W \   5 H F

$ G Y D Q F H G   P D W H U L D O V   D X W R P D W L R Q   [

2SWLFDO &RPPXQLFDWLRQ DQG ,QWHU &RPPXQLFDWLRQ (3

(QKDQFLQJ WKH SUHGLFWLRQ RI ORFRP

,PSURYLQJ JDV WXUELQH HQJLQH VWUX

8QORFNLQJ KLJK

$ U R E R W L F   E U H D V W   F D Q F H U   S D O S D W L R

W U D L Q L Q J   D Q G   D Z D U H Q H V V   H I I R U W V   (3

& R Q W U R O   P H W K R G V   I R U   µ H [F L W D E O H ¶   \

U X Q D Z D \   D Q G   U H D F W L R Q V   R I   Q H Z   ] H U R

(QHUJ\ QHWZRUN UHVLOLHQFH DQG UHO FKDQJH (3

'HYHORSLQJ D VWUR XOWUDVRXQG

UKHXPDWRLG DUWKULWLV (3

+LJK SUHFLVLRQ URERWLFV DQG VHQVL

Informatics

$FWLYH YLVXDO OHDUQLQJ (3

&RPSXWDWLRQDO DQG ELRORJLFDO SHU
FDQ WHUUD QLVH WR SURGXFH UREXVW
EHKDYLRXU (3

6 X V V H [& H Q W U H   I R U   & R Q V F L R X V Q H V V   6

/HYHUDJLQJ PDFKLQH OHDUQLQJ 0/ WK

V\QWKHVLV FKDOOHQJHV LQ WLPHG OR、

(YHŒEDVHG PDFKLQH OHDUQLQJ DQG QH

(3

+XPD QRPSXWHU LQWHUDFWLRQ ZLWK D
OHDUQLQJ DQG HGXFDWLRQ (3

+XPD QRPSXWHU LQWHUDFWLRQ ZLWK D
OHDUQLQJ DQG HGXFDWLRQ (3

,QWHJU(I$VOLDOLQDEOH $UWLILFLDO ,QWHO

'HWHFWLRQ 6\VWHPV WR RIIHU PRUH WU

HIIHFWLYH GHWHFWLRQ RI F\EHUDWWDF

8QGHUVWDQGLQJ WKH G\QDPLFV RI ODQG

WKHFUHDWLRQ RI SDWKZD\V WRZDUGV

(3

'HYHORS QHZ PRGHOV DQG GDWD VHWV FKDOOHQJHV LQ WKH UHFRJQLWLRQ RI

1 D W X U D O   / D Q J X D J H   3 U R F H V V L Q J   I R U   , P
3 H R S O H ¶ V   0 H Q W D O   + H D O W K   (3

$ G Y D Q F L Q J   P H F K D Q L V W L F   X Q G H U V W D Q
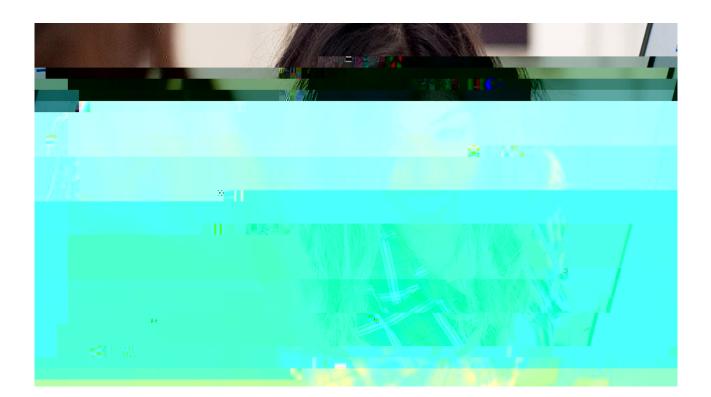
D Q D O \ W L F D O   D Q G   S K R V L F K L Q H   O H D U Q L Q

$SSOLHG DQG QXPHUQRDOOLDQGHDDUVSLDVUMRI

HTXDWLRQV ZLWK DSSOLFDWLRQV WR F

2SWLPDO WUDQVSRUW PDSV IRU PRGHO

(3

0DWKHPDWLFDO PRGHOOLQJ WR H[SORU

PLFURELDO LQWGHLUYDHFUWVLLRRQVLDQQVGKH VRL

(3

0DWKHPDWLFDO DQG FRPSXWDWLRQDO 3DUWLDO 'LIIHUHQWLDO (TXDWLRQV (3

1XPHULFDO $QDO\VLV RI 3DUWLDO 'LII

1DQRPDWHULDOV LQFOXGLQJ JUDSKHQH

UDQJH RI QDQRWHFKQRORJLHV DQG GH

_____ _____ _____ _____