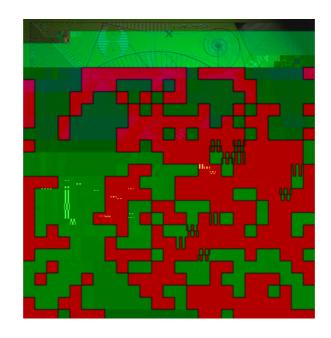
Superfast non-linear diffusion model of capillary transport in particulate porous media

by

A.V. Lukyanov, M.M. Sushchikh, M.J. Baines and T.G. Theofanous



Superfast non-linear di usion model of capillary transport in particulate porous media.

A L y no 1 M M shch h 2 M B nes 1 G heof no s 2 Dep r $_{\P}$ en of M he $_{\P}$ cs nd s cs $_{\P}$ n ers y of Re d ng Re d ng RG AX $_{\P}$ 1 Cen er for R s d es nd fe y $_{\P}$ n ers y of C forn n B r r n B r r CA $_{\P}$ A 2

Abstract

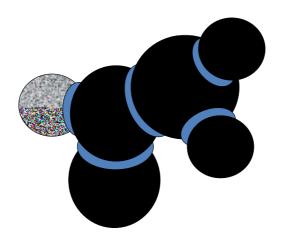
The migration of liquids driven by the capillary fdn

s r on e e he q d do $_{\mathbf{A}}$ ns $_{\mathbf{A}}$ y e her e he for $_{\mathbf{A}}$ of so ed pend r r ngs or s $_{\mathbf{A}}$ p y q d r dges for $_{\mathbf{A}}$ ed e een he spher c p r c es he ponsof con c s_{min} s $_{\mathbf{A}}$ - or hey $_{\mathbf{A}}$ y co escence n o $_{\mathbf{A}}$ ore co $_{\mathbf{A}}$ p e s r c res e r $_{\mathbf{A}}$ ers pen $_{\mathbf{A}}$ ers

s r on reg ne on y occ rs o er he s rf ce e en en s of he gr ns h e gener heore
c n ys s of e ng o s o er ro gh s rf ces s essen y nconpe e one c n o n n
es ne e of he perne y coe c en on he s s of res s f

fron n he c se of PME he s $_{f A}$ es of $s \approx$ he fron e d o he so c ed s gn on for h ch ${f V} \approx$ nd ng $_{f A}$ es occ r efore he fron e ec e y s r s $_{f A}$ o ng h s

$oldsymbol{special}$ in the substrate of the second control of t



 $\label{eq:constraints} F \ g \ r e \qquad \qquad s \ r \quad on \ of \ he \ pend \qquad r \ r \ ng \ reg \ \ \underline{\ } \underline{\ } \underline{\ } e \qquad o \qquad e \ e \ s \ of \ s \qquad r \quad on$

11

1 1 1