

	$s = 3$	$s = 5$	$s = 10$	$s = 50$
$m=n=2$	0.86107	0.86107	0.86107	0.86107
$m=n=4$	0.86118	0.86119	0.86119	0.86119
$m=n=6$	0.86120	0.86121	0.86121	0.86121
$m=n=8$	0.86121	0.86121	0.86121	0.86121
$m=n=10$	0.86121	0.86121	0.86121	0.86121

Table 3: Convergence of the “dual” steady-state flux for the recessed electrode with $L=1$ and $K=1$ using (39) and (A-16). In all cases $\Omega_{m,n}$ has been computed using (A-15) with the index i up to 100. The maximum s index used in (A-16) is given in the column heading. Each row corresponds to a different truncation of the linear system (39) to the indicated maximum value of m and n .

K	L	Dual	Finite Element Method	Eq. (45)	Eq.(46)&(47)	Linear (42)
1	0.1	1.408	1.408	1.458	1.420	0.785
1	1	0.861	0.861	0.867	0.863	0.785
10	0.1	2.841	2.841	2.900	2.870	2.484
10	1	2.485	2.485	2.485	2.485	2.484

Table 4: Steady state fluxes for recessed electrodes as computed from different approaches for selected values of K and L . The column labelled “dual” has been computed using coefficients up to a_8 in (39) and roots up to x_{50} in (A-16) .

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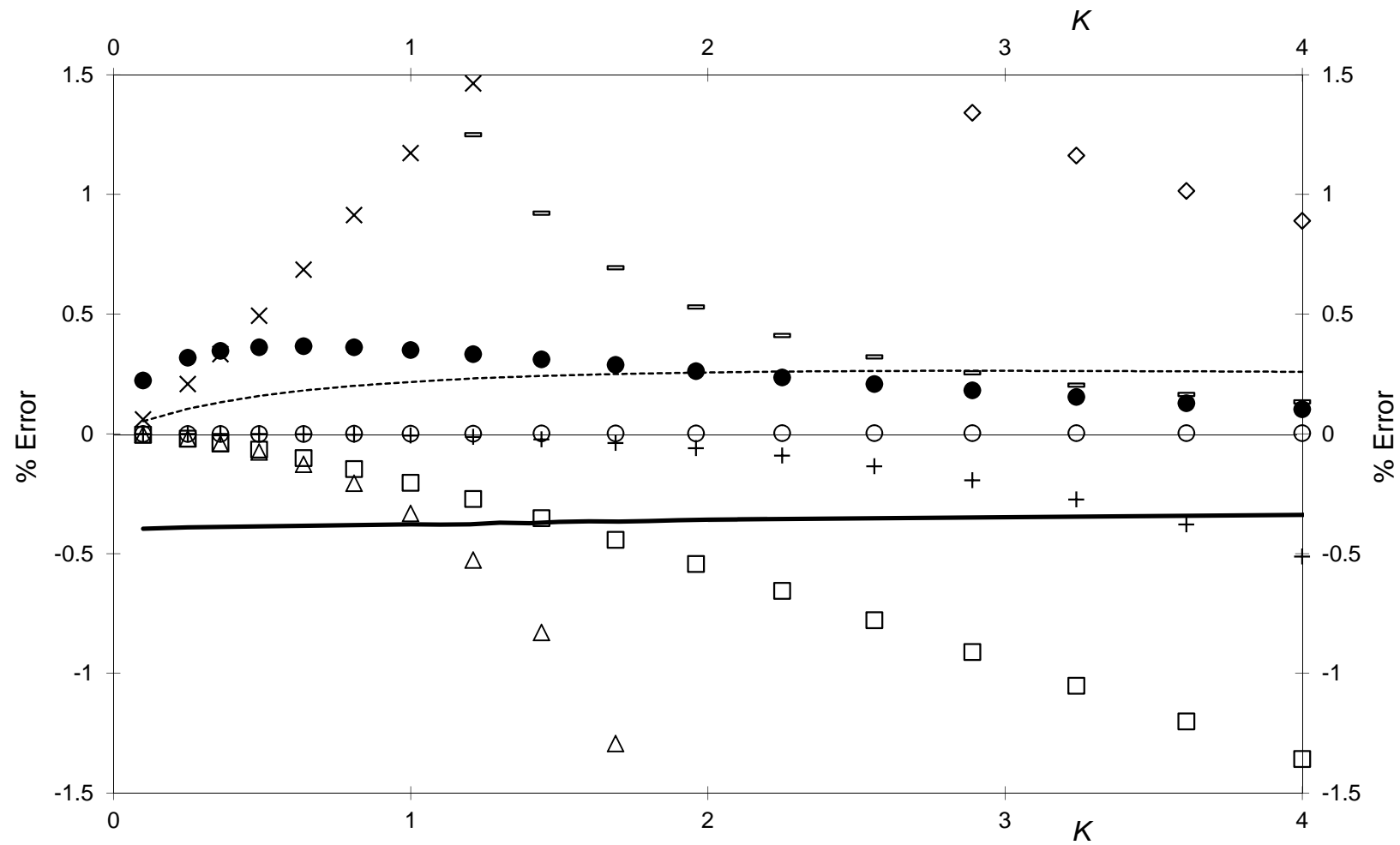


Fig 1

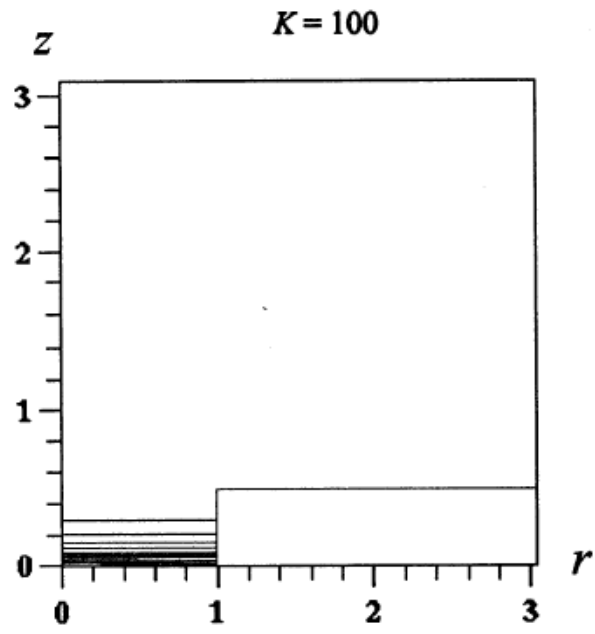
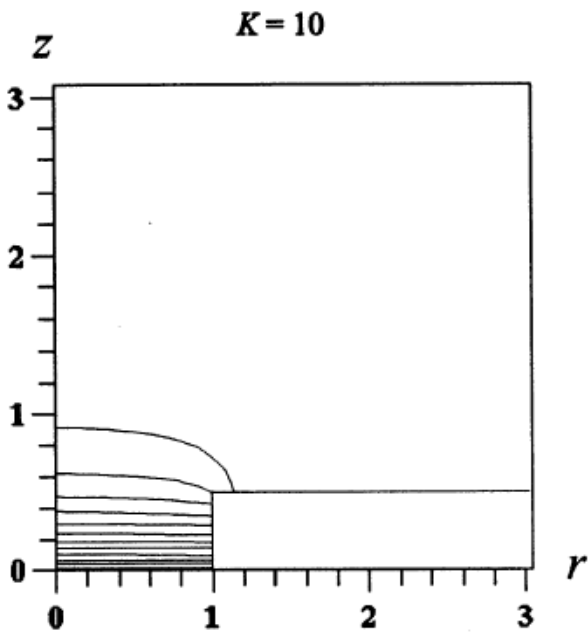
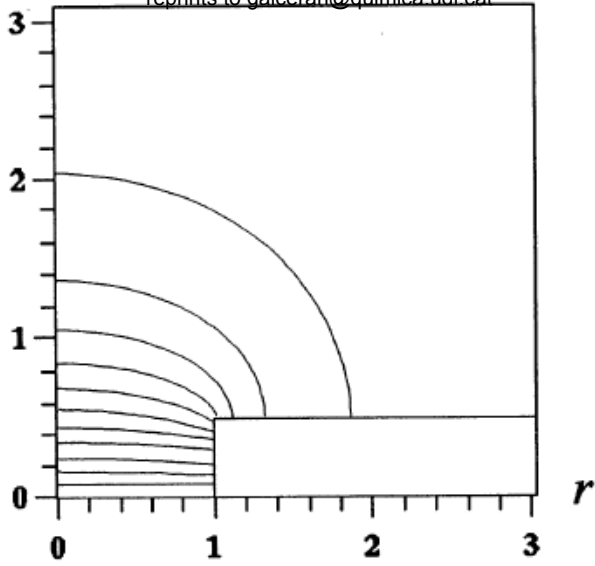
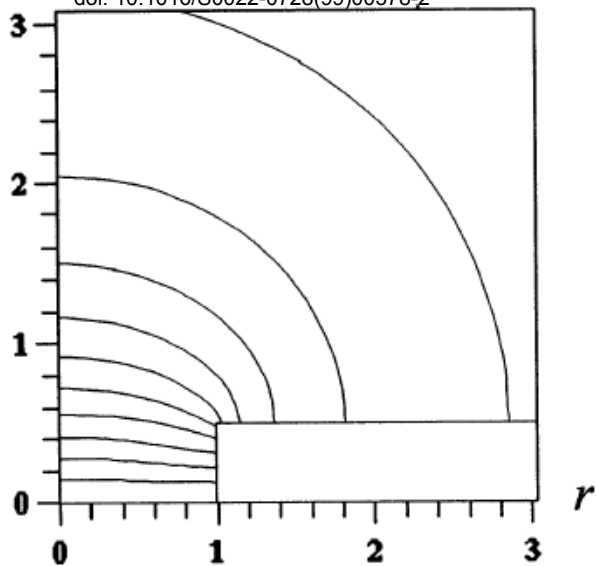


Fig 2

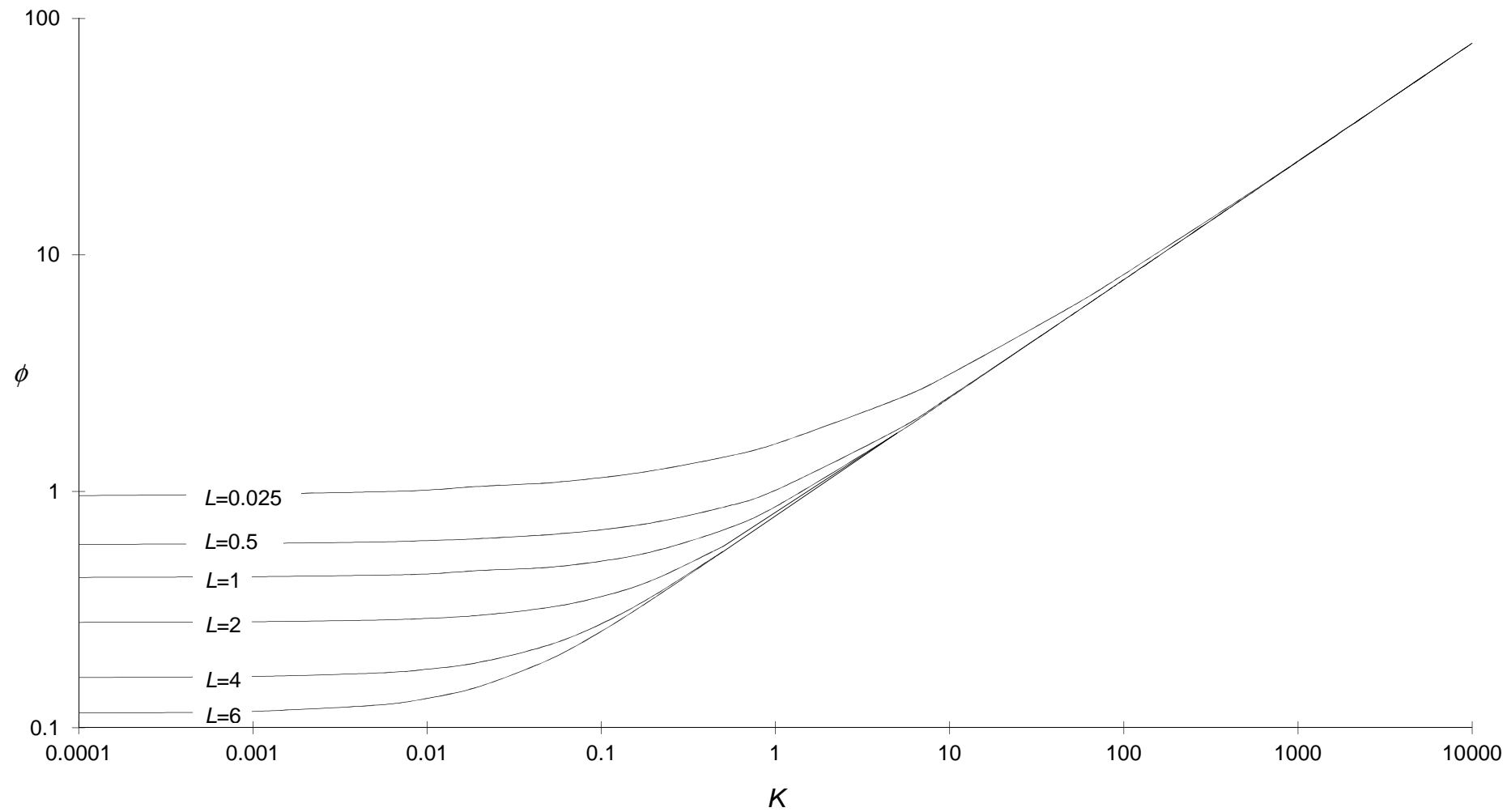


Fig 3

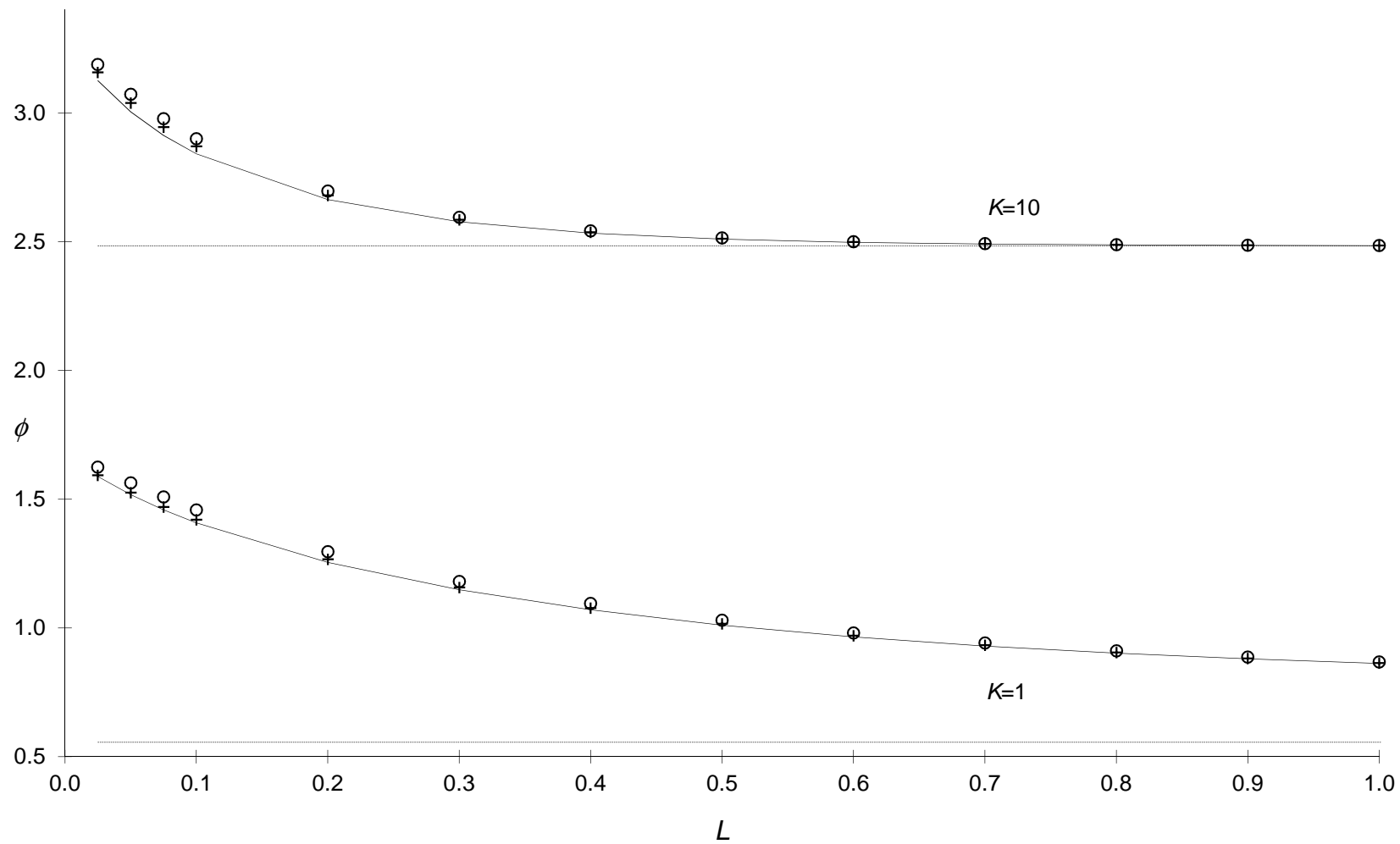


Fig 4

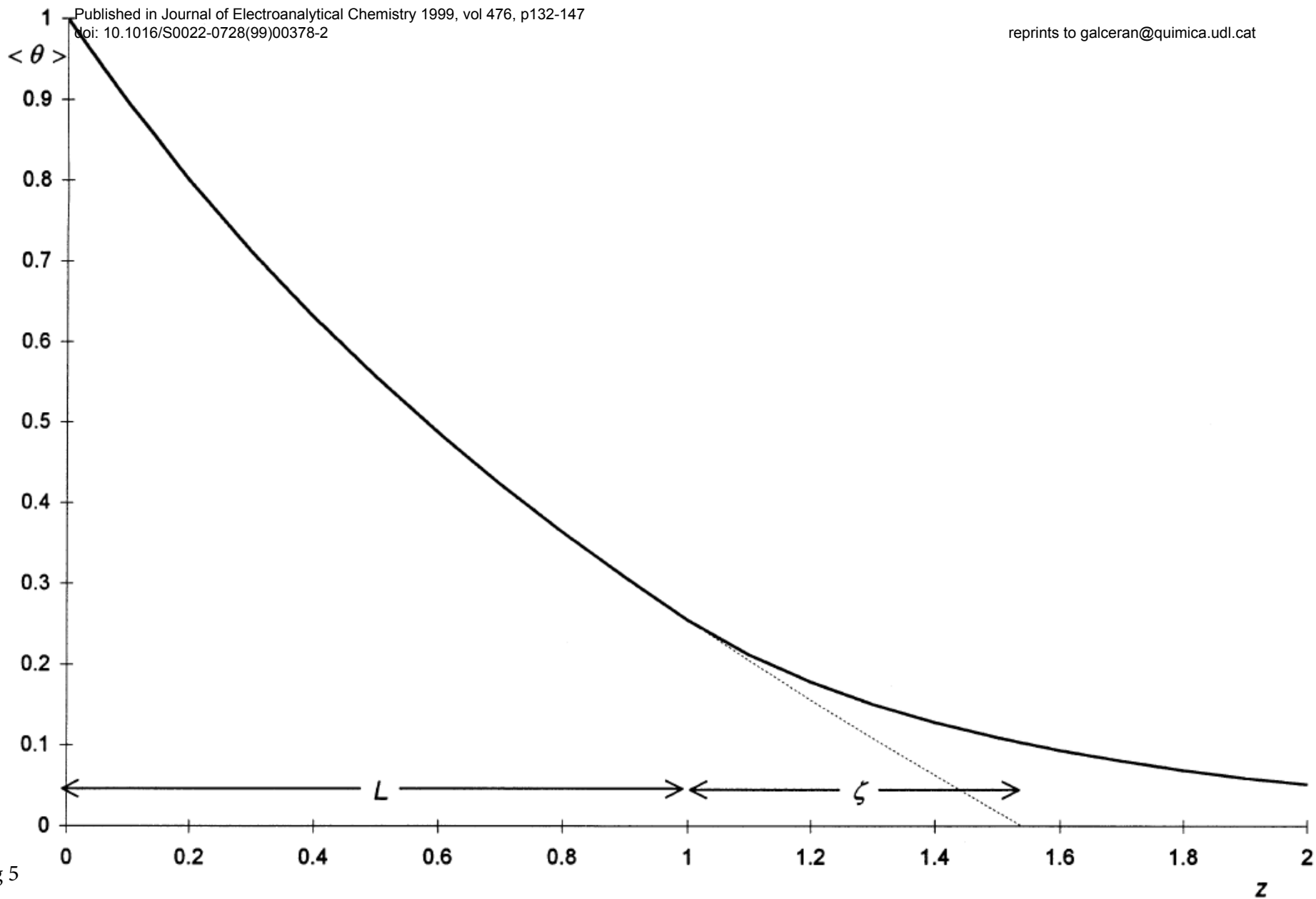


Fig 5