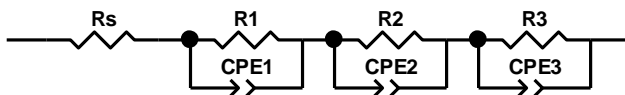


ASR cathode

T = 1173K

	1	2	3	
R	0.05378	0.11581	0.052571	
f	1.00E+06	5.00E+06	1.00E+05	
w	6285714.29	31428571	628571.4	
CPE-P	0.85615	0.40657	0.53602	
CPE-T	5.36E-06	6.32E-03	5.42E-07	
CPE	3.54487086	7.06419	0.000695	
Zcpe	0.28209772	0.141559	1439.432	Rs
Z	0.04516816	0.063698	0.052569	0.054929
Ztot	0.16143547			
A	1.76785714			
ASR	0.14269743			



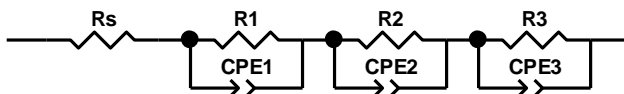
Element	Freedom	Value	Error	Error %
Rs	Free(+)	0.054929	0.0022113	4.0257
R1	Free(+)	0.053779	0.0044362	8.2489
CPE1-T	Fixed(X)	5.3603E-06	N/A	N/A
CPE1-P	Fixed(X)	0.85615	N/A	N/A
R2	Free(+)	0.11581	0.0041686	3.5995
CPE2-T	Fixed(X)	0.0063223	N/A	N/A
CPE2-P	Fixed(X)	0.40657	N/A	N/A
R3	Free(+)	0.052571	0.0035071	6.6712
CPE3-T	Fixed(X)	5.4172E-07	N/A	N/A
CPE3-P	Fixed(X)	1.036	N/A	N/A

Chi-Squared: 0.0055469
 Weighted Sum of Squares: 0.24406

Data File: C:\Users\Yoga Trianzar Malik\Documents
 Circuit Model File:
 Mode: Run Fitting / Freq. Range (1 - 5000000)
 Maximum Iterations: 100
 Optimization Iterations: 0
 Type of Fitting: Complex
 Type of Weighting: Calc-Modulus

T = 1123K

	1	2	3	
R	1.74E-04	0.048251	0.25429	
f	5.00E+01	3.00E+05	5.00E+06	
w	314.2857	1885714	31428571	
CPE-P	1.988	0.49278	0.53602	
CPE-T	1.13E-11	4.49E-02	2.55E-06	
CPE	1.05E-06	55.50311	0.026593	
Zcpe	956292.4	0.018017	37.60435	Rs
Z	0.000174	0.013119	0.252582	0.10413
Ztot	0.265875			
A	1.767857			
ASR	0.235014			



Element	Freedom	Value	Error	Error %
Rs	Free(+)	0.10413	0.00099393	0.95451
R1	Free(+)	0.0001741	1.2615E-06	0.72458
CPE1-T	Fixed(X)	1.1343E-11	N/A	N/A
CPE1-P	Fixed(X)	1.988	N/A	N/A
R2	Free(+)	0.048251	0.0017556	3.6385
CPE2-T	Fixed(X)	0.044863	N/A	N/A
CPE2-P	Fixed(X)	0.49278	N/A	N/A
R3	Free(+)	0.25429	0.001471	0.57847
CPE3-T	Fixed(X)	2.5471E-06	N/A	N/A
CPE3-P	Fixed(X)	0.84265	N/A	N/A

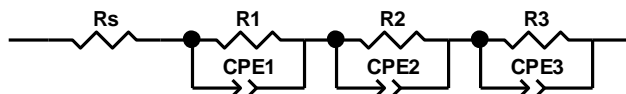
Chi-Squared: 0.0018529

Weighted Sum of Squares: 0.081529

Data File: C:\Users\Yoga Trianzar Malik\Documents
 Circuit Model File: C:\Users\Yoga Trianzar Malik\Documents
 Mode: Run Fitting / Freq. Range (1 - 5000000)
 Maximum Iterations: 100
 Optimization Iterations: 0
 Type of Fitting: Complex
 Type of Weighting: Calc-Modulus

T = 1073K

	1	2	3	
R	1.67E-04	0.07853	0.38221	
f	2.00E+01	3.00E+05	5.00E+06	
w	125.7143	1885714	31428571	
CPE-P	1.995	0.37549	0.53602	
CPE-T	1.04E-11	3.15E-01	1.00E-06	
CPE	1.6E-07	71.54036	0.010478	
Zcpe	6243165	0.013978	95.43845	Rs
Z	0.000167	0.011866	0.380685	0.14543
Ztot	0.392718			
A	1.767857			
ASR	0.347135			



Element	Freedom	Value	Error	Error %
Rs	Free(+)	0.14543	0.0024295	1.6706
R1	Free(+)	0.00016705	5.0903E-07	0.30472
CPE1-T	Fixed(X)	1.0383E-11	N/A	N/A
CPE1-P	Fixed(X)	1.995	N/A	N/A
R2	Free(+)	0.07853	0.0073412	9.3483
CPE2-T	Fixed(X)	0.3149	N/A	N/A
CPE2-P	Fixed(X)	0.37549	N/A	N/A
R3	Free(+)	0.38221	0.0035095	0.91821
CPE3-T	Fixed(X)	1.0036E-06	N/A	N/A
CPE3-P	Fixed(X)	0.89232	N/A	N/A

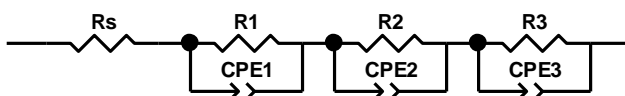
Chi-Squared: 0.0053538

Weighted Sum of Squares: 0.23557

Data File: C:\Users\Yoga Trianzar Malik\Documents
 Circuit Model File: C:\Users\Yoga Trianzar Malik\Documents
 Mode: Run Fitting / Freq. Range (1 - 5000000)
 Maximum Iterations: 100
 Optimization Iterations: 0
 Type of Fitting: Complex
 Type of Weighting: Calc-Modulus

T = 1023K

	1	2	3	
R	1.66E-04	0.12913	0.70225	
f	2.00E+01	1.00E+05	5.00E+06	
w	125.7143	628571.4	31428571	
CPE-P	1.989	0.39562	0.53602	
CPE-T	1.16E-11	1.73E-01	8.52E-07	
CPE	1.73E-07	34.11096	0.008895	
Zcpe	5774028	0.029316	112.4281	Rs
Z	0.000166	0.023892	0.697891	0.14109
Ztot	0.721949			
A	1.767857			
ASR	0.638151			



Element	Freedom	Value	Error	Error %
Rs	Free(+)	0.14109	0.0029741	2.1079
R1	Free(+)	0.00016614	2.0844E-06	1.2546
CPE1-T	Fixed(X)	1.1557E-11	N/A	N/A
CPE1-P	Fixed(X)	1.989	N/A	N/A
R2	Free(+)	0.12913	0.010203	7.9013
CPE2-T	Fixed(X)	0.17336	N/A	N/A
CPE2-P	Fixed(X)	0.39562	N/A	N/A
R3	Free(+)	0.70225	0.0045598	0.64931
CPE3-T	Fixed(X)	8.5194E-07	N/A	N/A
CPE3-P	Fixed(X)	0.87867	N/A	N/A

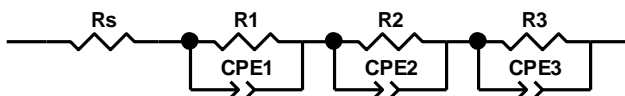
Chi-Squared: 0.0034347

Weighted Sum of Squares: 0.15113

Data File: C:\Users\Yoga Trianzar Malik\Documents
 Circuit Model File: C:\Users\Yoga Trianzar Malik\Documents
 Mode: Run Fitting / Freq. Range (1 - 5000000)
 Maximum Iterations: 100
 Optimization Iterations: 0
 Type of Fitting: Complex
 Type of Weighting: Calc-Modulus

T = 973K

	1	2	3	
R	4.39E-01	0.8263	0.62443	
f	3.00E+04	5.00E+05	1.00E+05	
w	188571.4	3142857	628571.4	
CPE-P	1.162	0.19005	0.53602	
CPE-T	8.06E-08	1.52E-01	1.64E-08	
CPE	0.108805	2.61733	2.11E-05	
Zcpe	9.19077	0.382069	47428.32	Rs
Z	0.419406	0.261264	0.624422	0.077042
Ztot	1.305092			
A	1.767857			
ASR	1.153608			



Element	Freedom	Value	Error	Error %
Rs	Free(+)	0.077042	0.0068952	8.9499
R1	Free(+)	0.43946	0.016295	3.708
CPE1-T	Fixed(X)	8.0639E-08	N/A	N/A
CPE1-P	Fixed(X)	1.162	N/A	N/A
R2	Free(+)	0.8263	0.057959	7.0143
CPE2-T	Fixed(X)	0.15242	N/A	N/A
CPE2-P	Fixed(X)	0.19005	N/A	N/A
R3	Free(+)	0.62443	0.011103	1.7781
CPE3-T	Fixed(X)	1.6441E-08	N/A	N/A
CPE3-P	Fixed(X)	1.12	N/A	N/A

Chi-Squared: 0.0061041

Weighted Sum of Squares: 0.26858

Data File: C:\Users\Yoga Trianzar Malik\Documents
 Circuit Model File: C:\Users\Yoga Trianzar Malik\Documents
 Mode: Run Fitting / Freq. Range (1 - 5000000)
 Maximum Iterations: 100
 Optimization Iterations: 0
 Type of Fitting: Complex
 Type of Weighting: Calc-Modulus

