

## Support Information

### Facile preparation of mesoporous graphenes by sacrificial template approach for direct methanol fuel cell application

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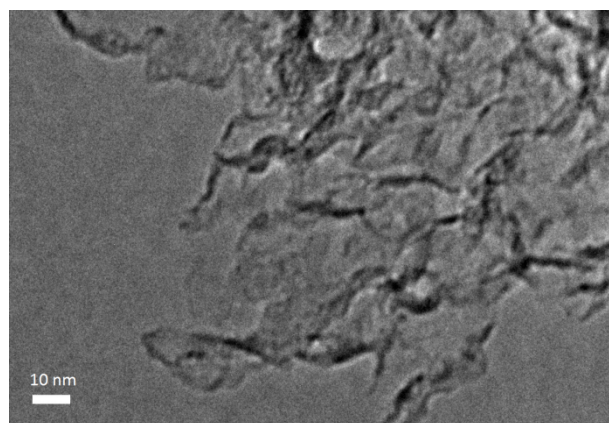


Fig. S1 HRTEM image of MGs.

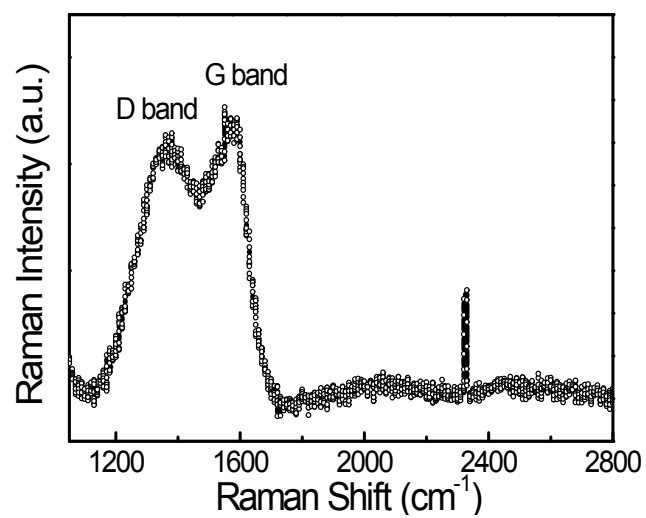


Fig. S2 Raman spectrum of MGs.

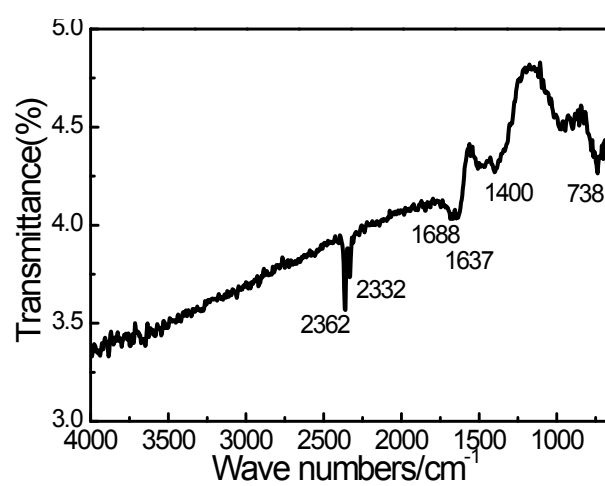


Fig. S3 FTIR spectrum of MGs.

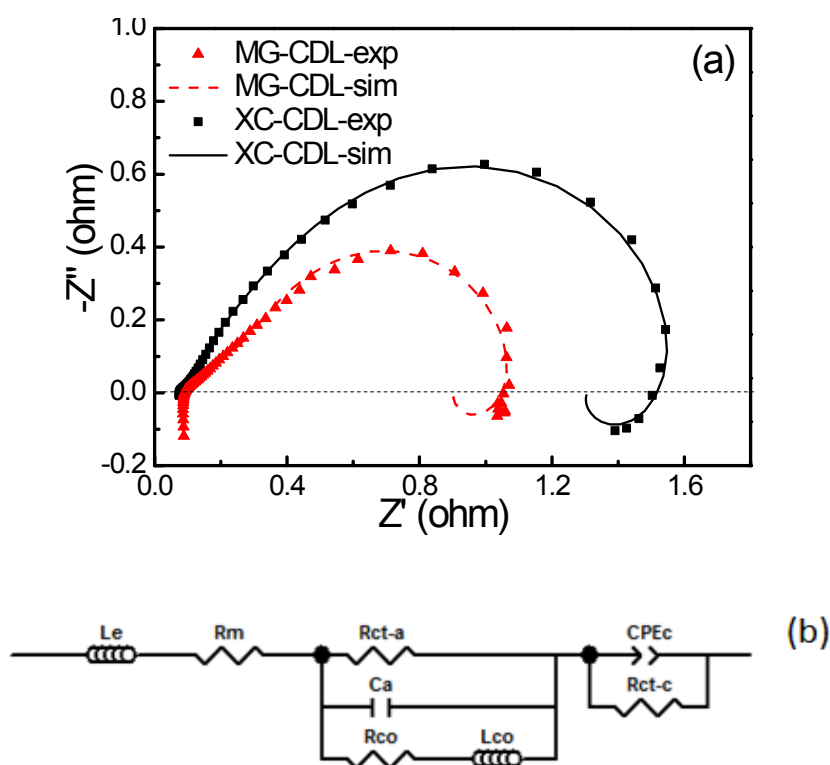


Fig. S4 Electrochemical impedance spectra (a) for two passive DMFCs employing MGs and XC-72R carbons in the CDL, respectively, fed with a 3 M methanol solution at 25 °C. Equivalent circuit (b) for the EIS analysis.

Table S1 Fitting parameters for the CPE-based equivalent circuit model.

| Parameter | $L_e/H$               | $R_m/\Omega$ | $R_{ct-a}/\Omega$ | $C_a/F$ | $R_{co}/\Omega$ | $L_{co}/H$ | $CPE_c-T/\Omega^{-1}s^n$ | $CPE_c-P$ | $R_{ct-c}/\Omega$ |
|-----------|-----------------------|--------------|-------------------|---------|-----------------|------------|--------------------------|-----------|-------------------|
| XC-CDL    | $1.23 \times 10^{-7}$ | 0.0744       | 0.818             | 1.45    | 0.85            | 19.5       | 0.923                    | 0.627     | 0.825             |
| MG-CDL    | $4.42 \times 10^{-7}$ | 0.0845       | 0.650             | 1.65    | 1.21            | 22.5       | 0.980                    | 0.495     | 0.405             |