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Electronic Supporting Information:

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Enzymatic Decomposition and Electrochemical Study of Alkali Lignin by Laccase (*Trametes versicolor*) in Presence of Natural Mediator (Methyl Syringate)

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This is the schematic of the experimental set up for lignin degradation by laccase mediator system in aerobic condition.



Fig. S1: Schematic of the experimental set up for lignin degradation by laccase mediator system in aerobic condition.



Fig. S2: The relative activity of the laccase from *Trametes versicolor* as a function of pH.

This is the schematic of the experimental set up for lignin degradation by laccase mediator system in aerobic condition.



Fig. S3: Schematic diagram of a three electrodes cell.



Fig. S4: The electrochemical stability of methyl syringate mediator in (a) anaerobic and (b) aerobic environments for 15 CV cycles, the black arrows indicating the direction of the current change with number of cycles.