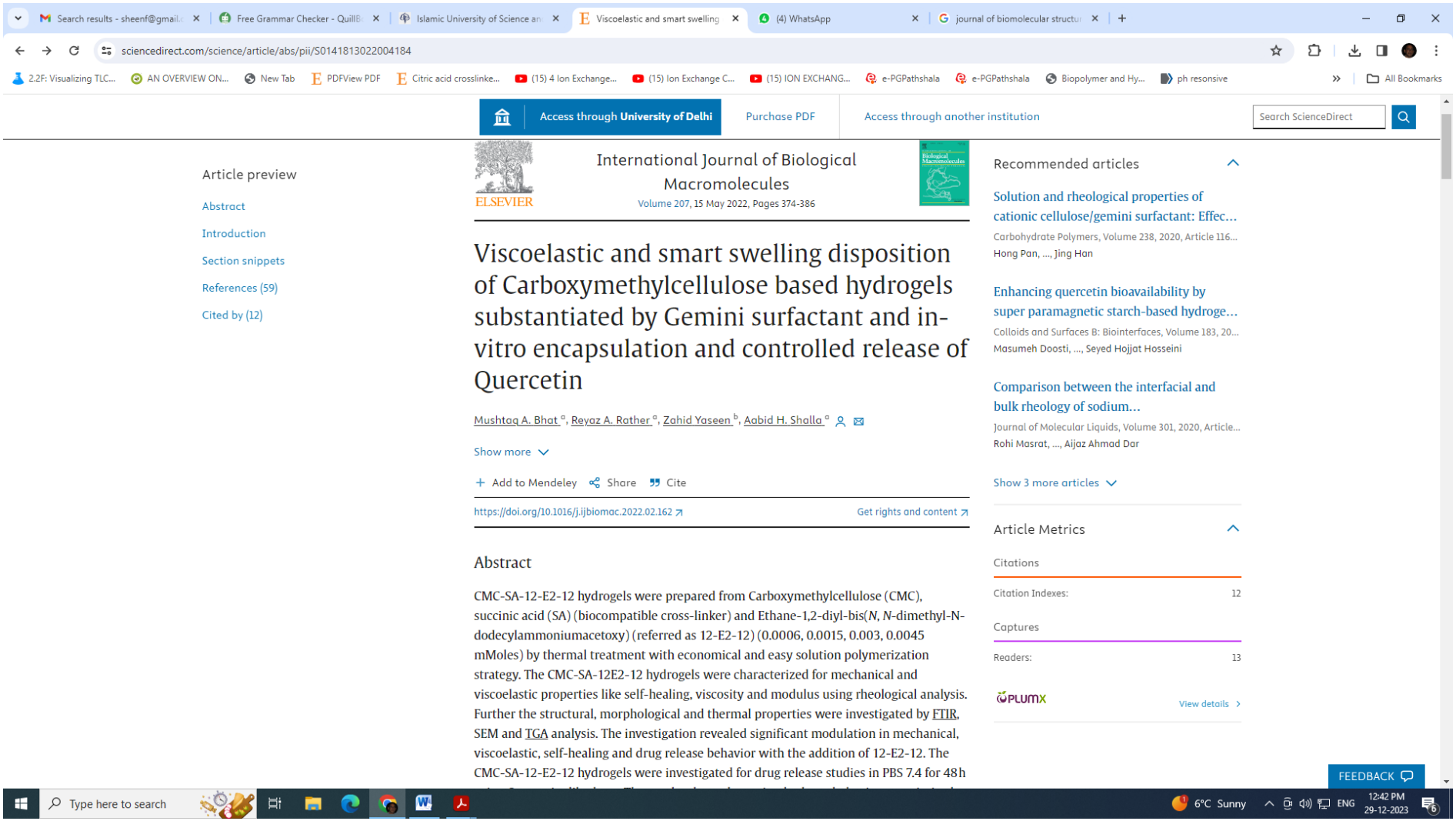
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Abstract
CMC-SA-12-E2-12 hydrogels were prepared from Carboxymethylcellulose (CMC), succinic acid (SA) (biocompatible cross-linker) and Ethane-1,2-diyl-bis(N, N-dimethyl-N-dodecylammoniumacetoxy) (referred as 12-E2-12) (0.0006, 0.0015, 0.003, 0.0045 mMoles) by thermal treatment with economical and easy solution polymerization strategy. The CMC-SA-12E2-12 hydrogels were characterized for mechanical and viscoelastic properties like self-healing, viscosity and modulus using rheological analysis. Further the structural, morphological and thermal properties were investigated by FTIR, SEM and TGA analysis. The investigation revealed significant modulation in mechanical, viscoelastic, self-healing and drug release behavior with the addition of 12-E2-12. The CMC-SA-12-E2-12 hydrogels were investigated for drug release studies in PBS 7.4 for 48 h
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