

8 Supplementary Material

| <i>Abbreviations</i> | <i>Module</i> | <i>Name</i> | <i>Constructor</i> | <i>Description</i> |
|---------------------------|-------------------------------|-----------------------|------------------------------------|---|
| <i>ABC</i> | <i>ABCIndex</i> | <i>ABC</i> | <i>ABCIndex()</i> | <i>atom – bond connectivity_index</i> |
| <i>Top_dia</i> | <i>Topological Index</i> | <i>Diameter</i> | <i>Diameter()</i> | <i>topological_diameter</i> |
| <i>Top_Shape</i> | <i>Topological Index</i> | <i>TopoShapeIndex</i> | <i>TopologicalShapeIndex()</i> | <i>topological_shape_index</i> |
| <i>Walk_C</i> | <i>WalkCount</i> | <i>MWC01</i> | <i>WalkCount(1, False, False)</i> | <i>walk_count_(leg – 1)</i> |
| <i>Top_Charge</i> | <i>Topological Charge</i> | <i>GGI1</i> | <i>TopologicalCharge('raw', 1)</i> | <i>1 – ordered raw topological_charge</i> |
| <i>Top_PSA</i> | <i>TopoPSA</i> | <i>TopoPSA(NO)</i> | <i>TopoPSA(True)</i> | <i>topological_polar surface_area (use_only_nitrogen and_oxygen)</i> |
| <i>S_log</i> | <i>SLogP</i> | <i>SLogP</i> | <i>SLogP()</i> | <i>Wildman – Crippen_LogP</i> |
| <i>R_B_C</i> | <i>RotatableBond</i> | <i>nRot</i> | <i>RotatableBondsCount()</i> | <i>rotatable_bonds_count</i> |
| <i>Wiener</i> | <i>WienerIndex</i> | <i>WPath</i> | <i>WienerIndex(False)</i> | <i>Wiener_index</i> |
| <i>Z1</i> | <i>ZagrebIndex</i> | <i>Zagreb1</i> | <i>ZagrebIndex(1, 1)</i> | <i>Zagreb_index (version_1)</i> |
| <i>Z2</i> | <i>ZagrebIndex</i> | <i>Zagreb2</i> | <i>ZagrebIndex(2, 1)</i> | <i>Zagreb_index (version_2)</i> |
| <i>mZagreb2</i> | <i>ZagrebIndex</i> | <i>mZagreb2</i> | <i>ZagrebIndex(2, –1)</i> | <i>modified_Zagreb index_(version_2)</i> |
| <i>Acid_Base</i> | <i>AcidBase</i> | <i>nAcid</i> | <i>AcidicGroupCount()</i> | <i>acidic group count</i> |
| <i>Arom_atic</i> | <i>Aromatic</i> | <i>nAromAtom</i> | <i>AromaticAtomsCount()</i> | <i>aromatic atoms count</i> |
| <i>Arom_atic_1</i> | <i>Aromatic</i> | <i>nAromBond</i> | <i>AromaticBondsCount()</i> | <i>aromatic bonds count</i> |
| <i>Atom_Count</i> | <i>AtomCount</i> | <i>nAtom</i> | <i>AtomCount('Atom')</i> | <i>number of all atoms</i> |
| <i>Atom_Count_1</i> | <i>AtomCount</i> | <i>nHeavyAtom</i> | <i>AtomCount('HeavyAtom')</i> | <i>number of heavy atoms</i> |
| <i>Atom_Count_2</i> | <i>AtomCount</i> | <i>nSpiro</i> | <i>AtomCount('Spiro')</i> | <i>number of spiro atoms</i> |
| <i>Atom_Count_3</i> | <i>AtomCount</i> | <i>nBridgehead</i> | <i>AtomCount('Bridgehead')</i> | <i>number of bridgehead atoms</i> |
| <i>Atom_Count_4</i> | <i>AtomCount</i> | <i>nHetero</i> | <i>AtomCount('Hetero')</i> | <i>number of hetero atoms</i> |
| <i>Atom_Count_5</i> | <i>AtomCount</i> | <i>nX</i> | <i>AtomCount('X')</i> | <i>number of halogen atoms</i> |
| <i>Auto_correlation</i> | <i>Autocorrelation</i> | <i>ATS0m</i> | <i>ATS(0, 'm')</i> | <i>moreau – broto autocorrelation of lag 0 weighted by mass</i> |
| <i>Auto_correlation_1</i> | <i>Autocorrelation</i> | <i>AATS0m</i> | <i>AATS(0, 'm')</i> | <i>averaged moreau – broto autocorrelation of lag 0 weighted by mass</i> |
| <i>Auto_correlation_2</i> | <i>Autocorrelation</i> | <i>ATSC0m</i> | <i>ATSC(0, 'm')</i> | <i>centered moreau – broto autocorrelation of lag 0 weighted by mass</i> |
| <i>Auto_correlation_3</i> | <i>Autocorrelation</i> | <i>AATSC0m</i> | <i>AATSC(0, 'm')</i> | <i>averaged and centered moreau – broto autocorrelation of lag 0 weighted by mass</i> |
| <i>Auto_correlation_4</i> | <i>Autocorrelation</i> | <i>MATS1m</i> | <i>MATS(1, 'm')</i> | <i>moran coefficient of lag 1 weighted by mass</i> |

| Abbreviations | Module | Name | Constructor | Description |
|-------------------------------------|-------------------------------------|---------------------|--|--|
| <i>Auto correlation_5</i> | <i>Autocorrelation</i> | <i>GATS1m</i> | <i>GATS(1, 'm')</i> | <i>geary coefficient oflag 1 weighted by mass</i> |
| <i>Balaban_J</i> | <i>BalabanJ</i> | <i>BalabanJ</i> | <i>BalabanJ()</i> | <i>Balaban's J index</i> |
| <i>Bertz_CT</i> | <i>BertzCT</i> | <i>BertzCT</i> | <i>BertzCT()</i> | <i>Bertz CT</i> |
| <i>Bond_Count</i> | <i>BondCount</i> | <i>nBonds</i> | <i>BondCount('any', False)</i> | <i>number of all bonds in non-kekulized structure</i> |
| <i>Carbon_Types</i> | <i>CarbonTypes</i> | <i>C1SP3</i> | <i>CarbonTypes(1, 3)</i> | <i>SP3 carbon bound to 1 other carbon</i> |
| <i>Constitutional</i> | <i>Constitutional</i> | <i>Sv</i> | <i>ConstitutionalSum('v')</i> | <i>sum of constitutional weighted by vdw volume</i> |
| <i>Constitutional_1</i> | <i>Constitutional</i> | <i>Mv</i> | <i>ConstitutionalMean('v')</i> | <i>mean of constitutional weighted by vdw volume</i> |
| <i>Eccentric Connectivity Index</i> | <i>Eccentric Connectivity Index</i> | <i>ECIndex</i> | <i>EccentricConnectivityIndex()</i> | <i>eccentric connectivity index</i> |
| <i>E_State</i> | <i>EState</i> | <i>NsLi</i> | <i>AtomTypeEState('count', 'sLi')</i> | <i>number of sLi</i> |
| <i>Fragment Complexity</i> | <i>Fragment Complexity</i> | <i>fragCpx</i> | <i>FragmentComplexity()</i> | <i>fragment complexity</i> |
| <i>Frame_work</i> | <i>Framework</i> | <i>fMF</i> | <i>Framework()</i> | <i>molecular framework ratio</i> |
| <i>Hydrogen Bond</i> | <i>HydrogenBond</i> | <i>nHBAcc</i> | <i>HBondAcceptor()</i> | <i>number of hydrogen bond acceptor</i> |
| <i>Hydrogen Bond_1</i> | <i>HydrogenBond</i> | <i>nHBDon</i> | <i>HBondDonor()</i> | <i>number of hydrogen bond donor</i> |
| <i>Information Content</i> | <i>Information Content</i> | <i>IC0</i> | <i>InformationContent(0)</i> | <i>0 – ordered neighborhood information content</i> |
| <i>Information Content 1</i> | <i>Information Content</i> | <i>IC1</i> | <i>InformationContent(1)</i> | <i>1 ordered neighborhood information content</i> |
| <i>Information Content 2</i> | <i>Information Content</i> | <i>IC2</i> | <i>InformationContent(2)</i> | <i>2 – ordered neighborhood information content</i> |
| <i>Information Content 4</i> | <i>Information Content</i> | <i>IC4</i> | <i>InformationContent(4)</i> | <i>4 – ordered neighborhood information content</i> |
| <i>Information Content_5</i> | <i>Information Content</i> | <i>IC5</i> | <i>InformationContent(5)</i> | <i>5 – ordered neighborhood information content</i> |
| <i>Information Content_6</i> | <i>Information Content</i> | <i>IC6</i> | <i>InformationContent(6)</i> | <i>6 – ordered neighborhood information content</i> |
| <i>Lipinski</i> | <i>Lipinski</i> | <i>Lipinski</i> | <i>Lipinski()</i> | <i>Lipinski rule of five</i> |
| <i>Lipinski_1</i> | <i>Lipinski</i> | <i>GhoseFilter</i> | <i>GhoseFilter()</i> | <i>Ghose filter</i> |
| <i>Log_S</i> | <i>LogS</i> | <i>FilterItLogS</i> | <i>LogS()</i> | <i>Filter – it LogS</i> |
| <i>McGowan Volume</i> | <i>McGowan Volume</i> | <i>VMcGowan</i> | <i>McGowanVolume()</i> | <i>McGowan volume</i> |
| <i>Moe_Type</i> | <i>MoeType</i> | <i>LabuteASA</i> | <i>LabuteASA()</i> | <i>Labute's Approximate Surface Area</i> |
| <i>Moe_Type_1</i> | <i>MoeType</i> | <i>PEOE_VSA1</i> | <i>PEOE_VSA(1)</i> | <i>MOE_Charge_VSA_Descriptor1 ($-\infty < x < -0.30$)</i> |
| <i>Moe_Type_2</i> | <i>MoeType</i> | <i>PEOE_VSA2</i> | <i>PEOE_VSA(2)</i> | <i>MOE_Charge_VSA_Descriptor2 ($-0.30 \leq x < -0.25$)</i> |
| <i>Moe_Type_3</i> | <i>MoeType</i> | <i>PEOE_VSA3</i> | <i>PEOE_VSA(3)</i> | <i>MOE_Charge_VSA_Descriptor3 ($-0.25 \leq x < -0.20$)</i> |
| <i>Moe_Type_4</i> | <i>MoeType</i> | <i>PEOE_VSA4</i> | <i>PEOE_VSA(4)</i> | <i>MOE_Charge_VSA_Descriptor4 ($-0.20 \leq x < -0.15$)</i> |
| <i>Moe_Type_5</i> | <i>MoeType</i> | <i>PEOE_VSA5</i> | <i>PEOE_VSA(5)</i> | <i>MOE_Charge_VSA_Descriptor5 ($-0.15 \leq x < -0.10$)</i> |
| <i>Path_Count</i> | <i>PathCount</i> | <i>MPC2</i> | <i>PathCount(2, False, False, False)</i> | <i>1 – ordered path count</i> |
| <i>Polariz_ability</i> | <i>Polarizability</i> | <i>apol</i> | <i>APol(False)</i> | <i>atomic polarizability</i> |
| <i>Polariz_ability_1</i> | <i>Polarizability</i> | <i>bpol</i> | <i>BPol(False)</i> | <i>bond polarizability</i> |
| <i>Ring_Count</i> | <i>RingCount</i> | <i>nRing</i> | <i>RingCount(None, False, False, None, None)</i> | <i>ring count</i> |
| <i>MW</i> | <i>Weight</i> | <i>MW</i> | <i>Weight(True, False)</i> | <i>exact molecular weight</i> |