

Table S3 - Calculated [scaled, DFT(B3LYP)/6-311++G(d,p)] wavenumbers, IR intensities and Potential Energy Distributions (PED) for conformer **I** of MCPIC.^a

Approximate description	Wavenumber	Intensity	PED ^b
v(C-H1)	3159	1.7	S ₃₇ (95)
v(C-H5)	3146	3.0	S ₄₁ (86)
v(C-H2)	3132	16.9	S ₃₈ (84)
v(C-H3)	3121	9.9	S ₃₉ (93)
v(C-H4)	3111	0.1	S ₄₀ (94)
vCH ₃ as'	3107	11.0	S ₈ (97)
vCH ₃ as''	3070	16.3	S ₉ (100)
vCH ₃ s	2998	34.3	S ₇ (97)
v(C=O)	1753	237.5	S ₂ (87)
vPh3	1614	1.0	S ₃₃ (63), S ₄₄ (10)
vPh4	1591	4.8	S ₃₄ (55), S ₂₂ (11)
vIsox3	1570	13.1	S ₂₄ (44), S ₆ (13), S ₃₄ (12)
δ(C-H4)	1499	1.8	S ₃₅ (26), S ₄₉ (14), S ₂₄ (12), S ₅₂ (16), S ₅₀ (11)
δCH ₃ as'	1469	5.2	S ₁₁ (73), S ₁₀ (13)
δ(C-H1), vIsox1	1459	83.7	S ₁₀ (12), S ₄₉ (11), S ₂₂ (11), S ₁₁ (11), S ₁ (10)
δCH ₃ as''	1457	11.6	S ₁₂ (90)
δCH ₃ s	1448	29.7	S ₁₀ (35), S ₃₆ (14), S ₄₉ (12), S ₅₁ (12)
vIsox2	1446	53.1	S ₂₃ (24), S ₁₀ (14), S ₂₂ (12)
vIsox4	1416	25.5	S ₂₅ (29), S ₁₀ (24), S ₁ (15)
δ(C-H2)	1339	5.6	S ₅₀ (31), S ₅₂ (28), S ₄₉ (16)
vPh2	1312	12.1	S ₃₂ (51), S ₃₆ (16)
vIsox2, v(C-C _{IR})	1258	94.7	S ₂₃ (16), S ₆ (13), S ₂₈ (10), S ₃₂ (10)
v(C-O)	1215	465.5	S ₃ (38), S ₁₃ (11)
δ(C-H3)	1190	5.8	S ₃₃ (24), S ₅₀ (19), S ₅₂ (18), S ₄₉ (15), S ₅₁ (12), S ₅₃ (12)
γCH ₃ '	1182	34.2	S ₁₃ (65)
δ(C-H5)	1165	0.5	S ₅₃ (48), S ₅₁ (24)
γCH ₃ ''	1149	0.9	S ₁₄ (92)
vIsox1	1121	19.6	S ₂₆ (22), S ₂₂ (17)
vPh6	1084	14.7	S ₃₆ (29), S ₃₂ (13), S ₄₉ (12), S ₅₂ (10)
δIsox2	1060	111.5	S ₂₈ (25), S ₄ (15), S ₅ (12)
vPh5	1031	0.5	S ₃₅ (45), S ₃₁ (20)
δPh1, vPh1	997	0.6	S ₄₂ (61), S ₃₁ (38)
γ(C-H2)	989	0.1	S ₄₅ (26), S ₅₆ (23), S ₅₇ (21), S ₅₅ (16)
vIsox5	978	53.5	S ₂₆ (32), S ₂₅ (17), S ₄ (14)
γ(C-H4)	973	1.0	S ₄₇ (26), S ₅₃ (21), S ₅₈ (17), S ₅₇ (17), S ₅₄ (16)
v(O-CH ₃)	953	5.5	S ₄ (48), S ₂₆ (18)
δIsox1	932	8.1	S ₂₇ (44), S ₂₃ (12)
γ(C-H5)	924	2.6	S ₅₆ (28), S ₅₄ (28), S ₅₈ (26), S ₄₆ (12)
γ(C-H1)	840	0.4	S ₅₄ (28); S ₅₈ (26), S ₅₇ (24), S ₅₅ (22)
δ(OCO)	809	31.9	S ₁₉ (36), S ₃ (17), S ₆₃ (14)
γ(C=O)	791	9.5	S ₂₁ (62), S ₆₀ (22)
γ(C-H3)	769	23.2	S ₅₆ (29), S ₆₂ (24.1)
δPh3	696	6.1	S ₄₄ (46), S ₆ (11), S ₂₇ (10)
τPh1	691	44.0	S ₄₅ (41), S ₅₇ (23), S ₅₅ (23)
τIsox1	680	23.4	S ₂₉ (35), S ₆₁ (25)
τIsox2	632	4.3	S ₃₀ (72), S ₂₁ (10)
δPh2	621	0.1	S ₄₃ (86)
w(Iox-E), w(Iox-Ph), w(C-Cl)	573	1.1	S ₆₆ (16), S ₆₅ (16), S ₆₄ (16), S ₂₀ (11)
v(C-Cl)	540	2.7	S ₅ (39), S ₂₀ (10), S ₂₂ (12)
γ(Ph-Iox)	485	2.7	S ₆₂ (34), S ₄₆ (19), S ₂₉ (11)
v(C-C _a)	447	0.02	S ₁ (22), S ₄₄ (16), S ₁₉ (10)
τPh3	401	0.05	S ₄₇ (72)
δ(CC=O)	362	10.3	S ₂₀ (22), S ₆₃ (18), S ₅ (13), S ₄₈ (11)
γ(Iox-E)	326	4.2	S ₄₆ (19), S ₆₁ (16), S ₆₀ (13)
δ(C-O-CH ₃)	302	13.7	S ₆₃ (38), S ₆₀ (10), S ₁₉ (10)
γ(C-Cl)	278	3.0	S ₅₉ (51), S ₆₀ (10)
v(C-C _a), v(C-C _{IR})	250	0.4	S ₆ (19), S ₁ (14), S ₄₄ (12), S ₂₈ (12)
w(C-Cl)	215	1.1	S ₆₄ (47), S ₂₀ (15), S ₄₈ (11)
τIsox1, γ(C-Cl)	178	0.8	S ₁₇ (26), S ₂₉ (16), S ₅₉ (15), S ₄₆ (13)
w(C-Cl), w(Ph-Iox)	150	1.1	S ₆₄ (18), S ₆₅ (17), S ₆₆ (15), S ₄₈ (12), S ₂₀ (10)
τCH ₃	135	0.1	S ₁₅ (75)
τ(C-O)	116	1.1	S ₁₇ (42), S ₁₅ (16)
w(Iox-Ph)	85	1.8	S ₆₆ (29), S ₆₅ (28), S ₄₈ (13), S ₂₀ (10)
γ(Iox-E), γ(Iox-Ph)	45	0.5	S ₆₀ (28), S ₆₁ (27), S ₂₉ (20)
τ(C-C _{IR})	29	0.1	S ₁₈ (95)
τ(C-C _a)	20	2.6	S ₁₆ (100)

^a Wavenumbers (cm⁻¹, scaled by 0.9817), v, bond stretching, δ, bending, γ, rocking, w, wagging, τ, torsion, s, symmetric, as, anti-symmetric, IR, inter-ring; Isox, isoxazole ring; Ph, phenyl ring; E, ester. See Table S2 for definition of internal coordinates. ^b Only PED values greater than 10% are given.