Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.
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Supplementary Material

Table 1S. Atomic coordinates, occupancy factors and isotropic displacement factors for HS-MOR at P_{amb}, compressed in silicone oil at 0.2 and 0.8 GPa, and in ethylene glycol at 0.1 GPa and at P_{amb} upon pressure release (rev).

				Silicone oil			Ethylene Glycol	
Site		**P_{amb}**		**0.2 GPa**	**0.8 GPa**		**0.1GPa**	**P_{amb} (rev)**
T1	x/*a*	0.3043(3)		0.3052(3)	0.3057(4)		0.3063(5)	0.3056(5)
	y/*b*	0.0736(3)		0.0742(3)	0.0745(3)		0.0751(4)	0.0750(4)
	z/*c*	0.0434(8)		0.0434(7)	0.0449(9)		0.0457(10)	0.047(1)
	UISO	0.020(9)		0.037(2)	0.071(4)		0.029(1)	0.032(3)
T2	x/*a*	0.3054(3)		0.3040(3)	0.3052(4)		0.3055(4)	0.3054(5)
	y/*b*	0.3105(3)		0.3107(3)	0.3109(3)		0.3096(4)	0.3093(5)
	z/*c*	0.0438(7)		0.0436(7)	0.0442(9)		0.0484(9)	0.047(1)
	UISO	0.020(9)		0.037(2)	0.071(4)		0.029(1)	0.032(3)
T3	x/*a*	0.0879(4)		0.0856(3)	0.0845(4)		0.0886(5)	0.0880(6)
	y/*b*	0.3808(4)		0.3800(4)	0.3781(5)		0.3814(5)	0.3802(6)
	z/*c*	0.25		0.25	0.25		0.25	0.25
	UISO	0.020(9)		0.037(2)	0.071(4)		0.029(1)	0.032(3)
T4	x/*a*	0.0858(4)		0.0854(3)	0.0838(5)		0.0901(5)	0.0904(6)
	y/*b*	0.2216(4)		0.2199(4)	0.2164(5)		0.2183(5)	0.2175(6)
	z/*c*	0.25		0.25	0.25		0.25	0.25
	UISO	0.020(9)		0.037(2)	0.071(4)		0.029(1)	0.032(3)
O1	x/*a*	0.1248(6)		0.1247(3)	0.1242(4)		0.1254(7)	0.1248(7)
	y/*b*	0.4074(6)		0.4077(4)	0.4045(6)		0.4045(7)	0.4059(8)
	z/*c*	0.431(1)		0.4258(5)	0.4274(6)		0.4339(9)	0.4333(9)
	UISO	0.024(1)		0.044(3)	0.079(5)		0.035(2)	0.038(4)
O2	x/*a*	0.1232(5)		0.1241(3)	0.1227(4)		0.1258(7)	0.1227(8)
	y/*b*	0.1898(7)		0.1918(4)	0.1901(6)		0.1877(9)	0.188(1)
	z/*c*	0.425(1)		0.4249(5)	0.4270(6)		0.429(2)	0.434(2)
	UISO	0.024(1)		0.044(3)	0.079(5)		0.035(2)	0.038(4)
O3	x/*a*	0.2350(5)		0.2378(4)	0.2366(5)		0.2336(7)	0.2352(7)
	y/*b*	0.1205(5)		0.1217(3)	0.1205(4)		0.1231(7)	0.1237(7)
	z/*c*	0.998(2)		0.996(2)	0.993(2)		1.004(2)	1.004(2)
	UISO	0.024(1)		0.044(3)	0.079(5)		0.035(2)	0.038(4)
O4	x/*a*	0.0927(7)		0.0897(7)	0.0832(10)		0.0941(9)	0.094(1)
	y/*b*	0.3012(4)		0.2999(3)	0.2972(5)		0.2998(6)	0.2990(7)
	z/*c*	0.25		0.25	0.25		0.25	0.25
	UISO	0.024(1)		0.044(3)	0.079(5)		0.035(2)	0.038(4)
O5	x/*a*	0.1689(8)		0.1716(5)	0.1693(6)		0.1687(10)	0.167(1)
	y/*b*	0.189(1)		0.1926(6)	0.1928(7)		0.1891(14)	0.189(1)

	z/c	0.75		0.75	0.75		0.75	0.75
	UISO	0.024(1)		0.044(3)	0.079(5)		0.035(2)	0.038(4)
O6	*x/a*	0.171(1)		0.1737(7)	0.1729(9)		0.166(1)	0.167(1)
	y/b	0.417(1)		0.4189(5)	0.4166(6)		0.418(1)	0.419(1)
	z/c	0.75		0.75	0.75		0.75	0.75
	UISO	0.024(1)		0.044(3)	0.079(5)		0.035(2)	0.038(4)
O7	*x/a*	0.2224(8)		0.2199(6)	0.2180(8)		0.222(1)	0.223(1)
	y/b	0.50		0.50	0.50		0.5	0.5
	z/c	0.5		0.50	0.50		0.5	0.5
	UISO	0.024(1)		0.044(3)	0.079(5)		0.035(2)	0.038(4)
O8	*x/a*	0.25		0.25	0.25		0.25	0.25
	y/b	0.25		0.25	0.25		0.25	0.25
	z/c	0.5		0.50	0.50		0.5	0.5
	UISO	0.024(1)		0.044(3)	0.079(5)		0.035(2)	0.038(4)
O9	*x/a*	0		0	0		0	0
	y/b	0.397(1)		0.4008(7)	0.4044(9)		0.400(2)	0.400(2)
	z/c	0.25		0.25	0.25		0.25	0.25
	UISO	0.024(1)		0.044(3)	0.079(5)		0.035(2)	0.038(4)
O10	*x/a*	0		0	0		0	0
	y/b	0.199(1)		0.1984(7)	0.1890(9)		0.199(7)	0.201(2)
	z/c	0.25		0.25	0.25		0.25	0.25
	UISO	0.024(1)		0.044(3)	0.079(5)		0.035(2)	0.038(4)
W1	*x/a*	0.50		0.50	0.50		0.5	0.5
	y/b	0.267(2)		0.253(3)	0.258(3)		0.267(7)	0.279(2)
	z/c	0.25		0.25	0.25		0.25	0.25
	fraction	0.40(1)		0.45(2)	0.48(3)		0.36(4)	0.48(4)
	UISO	0.08(2)		0.17(2)	0.21(3)		0.17(3)	0.22(4)
W2	*x/a*	0.436(3)		0.413(5)	0.50			
	y/b	0.487(3)		0.481(5)	0.475(4)			
	z/c	0.25		0.25	0.082(10)			
	fraction	0.25(1)		0.25(1)	0.27(1)			
	UISO	0.08(2)		0.17(2)	0.21(3)			
W3	*x/a*						0.5	0.5
	y/b						0.171(4)	0.171(2)
	z/c						0.25	0.25
	fraction						0.49(4)	0.94(4)
	UISO						0.17(3)	0.22(4)
W4	*x/a*						0.5	0.5
	y/b						0.388(13)	0.404(10)
	z/c						0.25	0.25
	fraction						0.25(4)	0.34(3)
	UISO						0.17(3)	0.22(4)
C1	*x/a*						0.5	0.5
	y/b						0.4699(5)	0.452(14)
	z/c						0.153(12)	0.163(10)
	fraction						0.47(8)	0.20(4)
	UISO						0.12(4)	0.20(0)

OH1-C2	*x/a*					0.448(3)	0.4556(4)
	y/b					0.509(3)	0.506(3)
	z/c					0.081(10)	0.090(6)
	fraction					0.43(3)	0.50(4)
	UISO					0.12(4)	0.20(0)
OH2	*x/a*					0.077(5)	0.080(3)
	y/b					-0.014(4)	-0.014(4)
	z/c					0.25	0.25
	fraction					0.41(5)	0.65(5)
	UISO					0.12(4)	0.20(0)

Table 2S: Bond distances for HS-MOR at P_{amb}, compressed in silicone oil at 0.2 and 0.8 GPa, and in ethylene glycol at 0.1 GPa and at P_{amb} upon pressure release (rev).

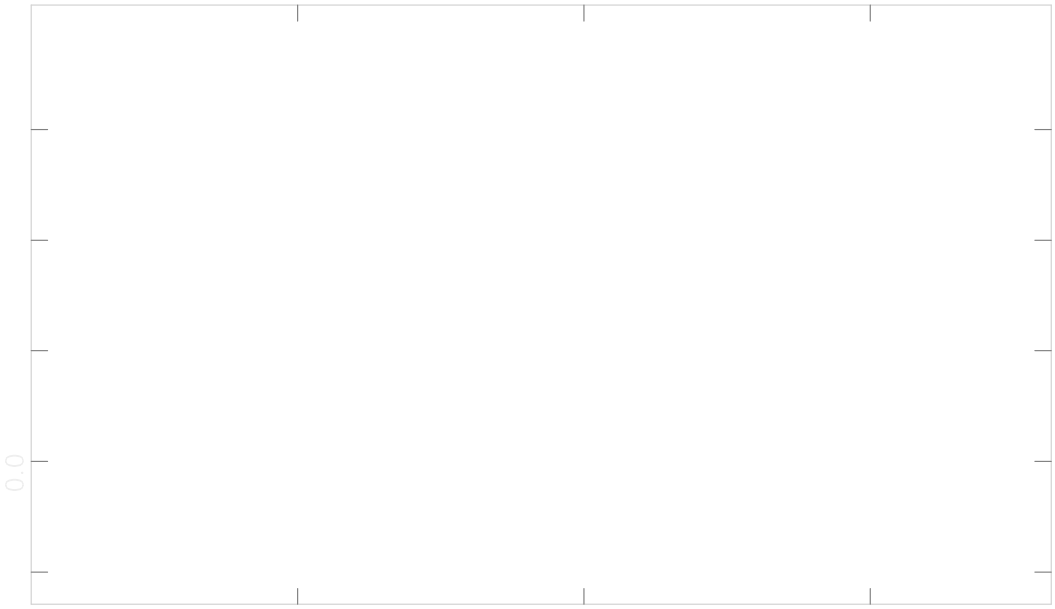
				Silicone oil				**Ethylene glycol**			
		***P*amb**		**0.2 GPa**		**0.8 GPa**		**0.1 GPa**		***P*amb (rev)**	
T1-	**O1**	1.574(5)		1.577(6)		1.577(7)		1.547(10)		1.566(10)	
	O3	1.606(5)		1.582(6)		1.581(8)		1.666(12)		1.644(11)	
	O6	1.616(5)		1.586(5)		1.564(7)		1.613(8)		1.603(9)	
	O7	1.596(5)		1.593(5)		1.570(7)		1.644(8)		1.646(8)	
T2-	**O2**	1.565(5)		1.556(6)		1.549(7)		1.530(10)		1.554(10)	
	O3	1.603(6)		1.589(6)		1.573(7)		1.585(11)		1.593(11)	
	O5	1.605(5)		1.592(5)		1.581(7)		1.577(7)		1.596(8)	
	O8	1.613(4)		1.601(5)		1.592(7)		1.613(7)		1.605(8)	
T3-	**O1**	1.601(4)		1.584(4)		1.573(5)		1.597(8)		1.610(8)	
	O1	1.601(4)		1.584(4)		1.573(5)		1.597(8)		1.610(8)	
	O4	1.611(5)		1.612(7)		1.602(8)		1.657(12)		1.650(12)	
	O9	1.621(5)		1.597(6)		1.597(8)		1.648(10)		1.644(11)	
T4-	**O2**	1.601(4)		1.578(4)		1.564(5)		1.609(8)		1.609(8)	
	O2	1.601(4)		1.578(4)		1.564(5)		1.609(8)		1.609(8)	
	O4	1.611(5)		1.611(6)		1.598(8)		1.655(12)		1.656(11)	
	O10	1.617(6)		1.598(6)		1.592(8)		1.672(11)		1.670(11)	
C1-	**C1**							1.45(14)		1.31(1)	
	OH1							1.34(6)	x2	1.47(20)	x2
OH1-	**C1**							1.34(6)	x2	1.47(20)	x2
	OH2							2.70(6)		2.62(5)	
	W4							2.92(14)	x4	2.52(18)	

C2-	**OH2**							1.42(6)	x2	1.42(5)	x2
	C2							1.26(8)		1.36(8)	
OH2-	**C2**							1.42(6)	x2	1.42(5)	x2
	OH2							2.80(17)		2.88(11)	
	OH1							2.70(6)		2.62(5)	
	W4							2.44(17)	x2	2.19(14)	x2
W1-	**O5**	3.17(2)	x2	3.28(2)	x2	3.18	x2	3.20(3)	x2	3.093(25)	x2
	W3									2.192(15)	
	W4							2.56(15)		2.54(21)	
W2-	**W2**	2.31(2)		2.32(1)		2.2(1)	1				
W3-	**W1**									2.192(15)	
	O6							3.51(4)	x2		
W4-	**W1**							2.56(15)		2.54(21)	
	OH1							2.92(14)	x4	2.19(14)	x2
	OH2							2.44(17)	x2	2.52(18)	x4

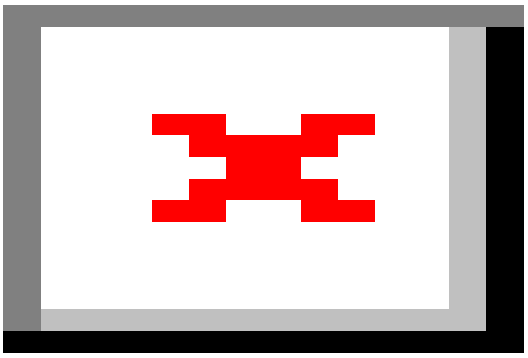
Fig. 1S. Observed (red crosses), calculated (green), and difference (pink) powder diffraction patterns of HS-MOR at P_{amb} in capillary (A), compressed in silicone oil at 0.2 (B) and 0.8 (C) GPa and compressed in ethylene glycol at 0.1 GPa (D) and at P_{amb} upon pressure release (E).

A)

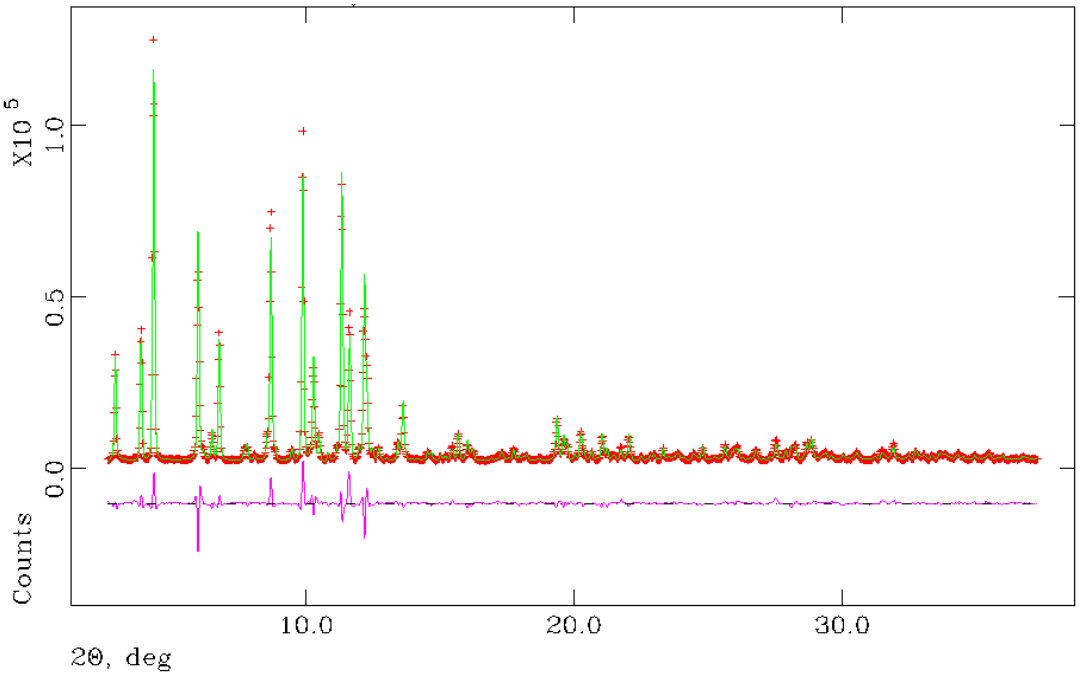
B)



C)

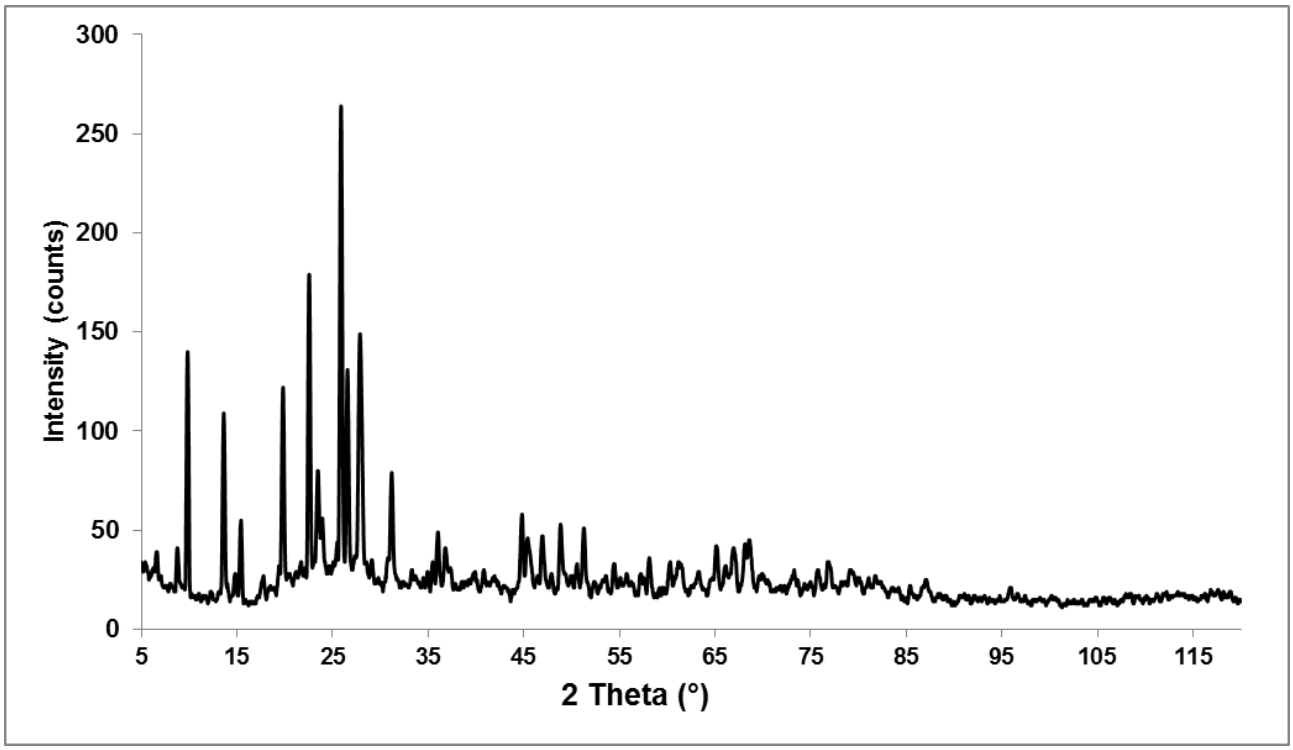


D)



E)

Figure 2S: XRPD pattern collected at P_{amb} on the recovered powder after compression up to 1 GPa in a multianvil cell.


Intensity (counts)
300
250
200
150
100
50
0
5
15
25
35
45
55
65
75
85
95
105
115
2 Theta (°)