Supporting Information for

Synthesis of Porous Coordination Polymers using

Carbon Dioxide as a Direct Source

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Materials and general methods

All chemicals and solvents used in the syntheses were of regent grade and used without any further purification. LiBH₄, Mg(BH₄)₂, anhydrous MgCl₂ and tetraethylammonium borohydride were purchased from Sigma-Aldrich. Anhydrous MnCl₂ and FeCl₂ were purchased from Strem Chemicals. Tetraphenylphosphonium chloride were purchased from Tokyo Chemical Industry Co., Ltd. Zn(NO₃)₂·6H₂O, anhydrous ZnCl₂, CoCl₂, super dehydrated acetonitrile (MeCN), super dehydrated diethyl ether (Et₂O), deoxidized dichloromethane (DCM), deoxidized methanol (MeOH), MeOH, deuterated dimethyl sulfoxide (DMSO-*d*₆), deuterium oxide (D₂O) trimethyl amine and formic acid (HCO₂H) were purchased from Wako Pure Chemical Industries, Ltd.

Powder X-ray diffraction (PXRD): PXRD patterns were collected on a Rigaku MiniFlex with CuK_{α} anode.

Fourier transform infrared (IR): IR spectra were collected using a Bruker Optics ALPHA FT-IR spectrometer with the Universal ATR accessory under Ar and a Nicolet ID5 ATR under air.

Thermogravimetric analysis (TGA): TGA profiles were collected using a Rigaku Thermo plus TG 8121 apparatus in the temperature range of 40 to 500 °C at a heating rate of 10 °C min⁻¹ under flowing Ar.

Gas adsorption: gas adsorption isotherms were collected by a BELSORP-max for N_2 at 77 K and CO_2 at 195 K.

Mechanochemical milling: mechanochemical milling was performed using a planetary ball-milling apparatus with zirconia vessel and balls (Fritsch, Pulverisette 7) under Ar. The volumetric capacity of the pot was 20 mL and 10 balls with a diameter of 10 mm were used for the milling.

Scanning electron microscope (SEM): SEM images were captured using a Hitachi SU5000 instrument.

Electrospray ionization mass spectrometry (ESI-MS): ESI mass spectra were collected on a Bruker model micrOTOF II using MeCN as a solvent with an ionization temperature of 150 °C.

Elemental analysis: CHN elemental analysis was conducted on a MICRO CORDER JM11 (J-Science Lab Co., LTd.)

Solution nuclear magnetic resonance (NMR): ¹H, ¹¹B and ¹³C NMR spectra were collected at 25 °C on a Bruker Avance III instrument with AS500 magnet (500 MHz). DMSO- d_6 was dried using molecular sieves (4A) and stored inside

Ar-filled glovebox. ¹¹B NMR spectra were collected using a quartz-based NMR tube and $BF_3 \cdot Et_2O$ complex was used as an external standard for 0 ppm.

Solid-state nuclear magnetic resonance (NMR): The NMR experiments were performed on either the JNM-ECZ600R (JEOL RESONANCE Inc.) solid-state NMR spectrometer at 14.1 T or the JNM-ECA700II (JEOL RESONANCE Inc.) solid-state NMR spectrometer at 16.4 T. All experiments were acquired at room temperature and under a MAS frequency of 70 kHz, unless otherwise stated. Mg-XMPa (X = 2, 3, 4) samples were separately packed into 1.0 mm zirconia rotors. The following experiments were recorded at the 14.1 T solid-state NMR spectrometer. For quantitative ¹H spectra, the spin-echo experiments were used. The ¹H pulse lengths were 1.2 μ s and 2.6 μ s for $\pi/2$ and π pulses, respectively. The total spin echo delay was set to 2 rotor periods and 3 scans were collected. The recycling delays were 10 s, 20 s, and 7 s for Mg-XMPa (X = 2, 3, 4), respectively. For quantitative ¹¹B spectra, a single ¹¹B pulse with a length of 3.5 us and a nutation radio frequency (rf)-field of 8.5 kHz was performed at a MAS frequency of 30 kHz. These experimental conditions were chosen so that quantitative condition for ¹¹B signal intensities is fulfilled regardless to the size of ¹¹B quadrupolar coupling (Fig S38–39). The number of scan was 10240 for Mg-2MPa, whereas it was 11520 for Mg-3MPa and Mg-4MPa. The recycling delay was 3.0 s for all Mg-XMPa (X = 2, 3, 4) samples. The rest of the experiments were recorded at the 16.4 T solid-state NMR spectrometer. For two-dimensional (2D) ¹H-{¹³C} double cross-polarization (CP) experiment, the ¹H and ¹³C pulse lengths were 0.85 μ s and 1.1 μ s for $\pi/2$ pulses, respectively. In order to fulfill the double-quantum Hartmann Hahn condition for CP transfer, the ¹H and ¹³C rf fields were set to 15 kHz and 55 kHz, respectively. On ¹³C channel, the linear ramp of -10 % for the first CP contact (CP1) and of 12 % for the second CP contact (CP2) were used to broaden the matching Hartman Hahn condition. The CP1 time was 2.0 ms to maximize the transfer efficiency while the CP2 time was 0.5 ms to select only protons covalently bonded to carbons. The HORROR with XY phase cycling was applied on ¹H channel for 100 ms with ¹H rf field of 35 kHz while the WALTZ ¹³C and ¹H decoupling sequences were used with a rf-field strength of 10 kHz. 8 scans were collected for each 32 t_1 increment, the recycling delay was 2 s. The total experimental time was about 17 mins. For 2D ¹H-{¹¹B} dipolar-HMQC spectrum, the ¹H pulse lengths were 0.85 μ s and 1.7 μ s for $\pi/2$ and π pulses, respectively, while the ¹¹B pulse length was 1.4 µs. The SR4²₁ recoupling

sequence was used to reintroduce the ¹H-¹¹B couplings. The ¹H rf-field during SR4²₁ sequence was set to 140 kHz and the total recoupling duration was set to 0.4 ms. The indirect spectral width was 17.5 kHz with 64 t_1 increments and 48 scans for each t_1 point were collected. The recycling delay was 2 s. The total experimental time was about 3.4 hours. For probing boron proximities, the 2D nuclear Overhauser effect spectroscopy (NOESY) was used at mixing time of 300 ms. The ¹¹B pulse length was 1 μ s with the highest technically possible rf power. For the acquisition of 2D NOESY spectrum, 64 scans were collected with a recycling delay of 1 s; the indirect spectral width was 10 kHz with 24 t_1 increments. The total experimental time was about 0.9 hours. For all 2D experiments, the States-TPPI method was used for the quadrature detection along the indirect dimension.

X-ray absorption spectroscopy (XAS): synchrotron X-ray absorption spectra were collected at the Aichi Synchrotron Radiation Center (Aichi SR) on BL1N2. XASs in the energy range of the Mg K-edge were measured using partial fluorescence yield mode. The powder sample of **Mg-3MPa** and $[Mg_3(CHO_2)_6]$ were dried at 70 °C under vacuum for 12 hours, and transferred into Ar-filled glovebox without air exposure. An Indium (In) sheet (0.20 ×10 × 10 mm³) was attached a sampling plate using a carbon tape. Each sample was attached on the In sheet, and sampling palate was placed into a closed measurement vessel in Ar-filled glovebox, and XAS measurements were performed without air exposure.

X-ray scattering: The powder sample of **Mg-3MPa** was sealed in a Lindemann glass capillary (0.4 mm) inside Ar-filled glovebox. The X-ray total scattering data were collected at λ = 0.355447 Å with a large Debye–Scherer camera and image plate covering the Q range to 22 Å⁻¹ at the BL02B2 beamline at the Super Photon Ring (SPring-8, Hyogo, Japan). The correction of the data for Compton scattering, multiplicative contributions, and Fourier transformation were performed with PDFgetX3.¹ A Gauss window (exp[-*BQ*²], *B* = 0.023) was applied to the structure functions into PDFs to suppress truncation errors.

Synthesis of [PPh₄][Zn(BH₄)₃]

The synthesis procedure was modified from that of $[PPh_4][Zn_2(BH_4)_5]$.² Anhydrous ZnCl₂ (681.6 mg, 5.0 mmol) and LiBH₄ (272.3 mg, 12.5 mmol) were mixed and were transferred to a ball mill vessel inside Ar-filled glovebox. The ball mill vessel was previously oven dried. The ball mill vessel was taken outside the glovebox, and the reaction mixture was milled at 200 rpm for 45 minutes (5 minutes of milling and 5 minutes of rest × 9 cycles). The vessel was brought back into the glovebox, and the resultant powder was mixed with PPh₄Cl (984.0 mg, 2.6 mmol) under Ar atmosphere. The mixture was milled at 200 rpm for 30 minutes (5 minutes of milling and 5 minutes of rest × 6 cycles). The obtained powder was soaked into deoxidized DCM (50 mL) and white precipitate was removed by filtration. The obtained colorless filtrate was evaporated at 25 °C and white powder was collected (45% yield).

Synthesis of [Zn₃(HCO₂)₆] (Zn-CO₂) from gaseous CO₂

 $[PPh_4][Zn(BH_4)_3]$ (224.7 mg, 0.5 mmol) was dissolved in 10 mL of super dehydrated MeCN in a 20 ml round-bottom flask with a stir bar under Ar. The flask was sealed with a rubber septum and taken outside the glovebox. CO₂ gas (>99.995%) was bubbled through the solution at a rate of 60 mL min⁻¹ and the reaction mixture was stirred at 25 °C. In 40 minutes, white precipitate was formed. After bubbling for a total of 12 hours, the precipitate was filtrated, washed with super dehydrated MeCN, and dried at 25 °C under vacuum (45.4 mg, 58.4% yield).

Synthesis of [Zn₃(HCO₂)₆] (Zn-FA) from formic acid

The synthesis was followed by the reported method.³ Zn(NO₃)₂·6H₂O (3.0 g, 10.1 mmol) was dissolved in 25 mL of MeOH. A MeOH solution (25 mL) of HCO₂H (2.0 g, 1.64 mL) and NEt₃ (2.0 g, 2.75 mL) was prepared and mixed with Zn salt solution at 25 °C. The reaction mixture was stirred at 25 °C for 12 hours. White precipitate was filtrated, washed with MeOH, and dried at 25 °C under vacuum (1.150 g, 22.7% yield).

Synthesis of $[M_3(HCO_2)_6]$ (M-CO₂, M = Mg²⁺, Mn²⁺, Fe²⁺, Co²⁺) from gaseous CO₂

Tetraethylammonium borohydride (290.2 mg, 2.0 mmol) was dissolved in 10 mL of super dehydrated MeCN and transferred to the glass-lined high pressure

vessel under Ar. A stir bar was added, and the reactor was then assembled inside Ar-filled glovebox. The setup was taken outside the glovebox and placed in a fume hood behind a blast shield. The pressure was pressurized with 2.0 MPa of CO₂ (>99.995%) and the reaction mixture was stirred at 25 °C. The pressure was checked every 15 minutes and pressurized to 2.0 MPa. After stirring for a total of 1.5 hours, the reaction vessel was purged with Ar three time to avoid exposure to air. The reaction vessel was sealed under 0.1 MPa of Ar and brought back into the glovebox. The obtained solution was slightly cloudy and transferred to a 30 mL glass vial. 1.0 mmol of anhydrous metal chlorides (MgCl₂: 95.2 mg, MnCl₂: 125.8 mg, FeCl₂: 126.8 mg, CoCl₂: 129.8 mg, respectively) was dissolved into 10 mL of deoxidized MeOH and added into the vial under Ar. The vial was taken outside the glovebox and heated in a temperature controllable oven at 70 °C for 12 hours. The precipitate was filtrated and washed with MeOH, and dried at 25 °C under vacuum. The yields were calculated as **Mg-CO₂**: 70.0%, **Mn-CO₂**: 40.8%, **Fe-CO₂**: 44.6%, **Co-CO₂**: 87.9%.

Synthesis of $[Mn_3(HCO_2)_6]$ (Mn-CO₂-Air) from 400 ppm of CO₂ in compressed air.

Tetraethylammonium borohydride (72.6 mg, 0.5 mmol) was dissolved in 100 mL of super dehydrated MeCN and transferred to a 200 mL round-bottom flask with a stir bar under Ar. The flask was sealed with a rubber septum and taken outside the glovebox. Air gas (>99.99%, CO₂: approx. 400 ppm) was bubbled through the solution at a rate of 60 mL min⁻¹ and the reaction mixture was stirred at 25 °C. After stirring for 30 hours, the resulting solution was concentrated under vacuum to a volume of about 10 mL, and brought back into the glovebox. The concentrated solution was transferred to a 30 mL glass vial. Anhydrous MnCl₂ (31.5 mg, 0.25 mmol) was dissolved into 10 mL of super dehydrated MeOH and added into the vial under Ar. The vial was taken outside the glovebox and heated in a temperature controllable oven at 70 °C for 12 hours. The precipitate was filtrated and washed with MeOH, and dried at 25 °C under vacuum. The yields were calculated as 11.6%.

Synthesis of Mg-XMPa (X = 2, 3, 4)

 $Mg(BH_4)_2$ (54.0 mg, 1.0 mmol) was dissolved in 20 mL of super dehydrated MeCN and transferred to the glass-lined high pressure vessel under Ar. A stir bar was added, and the reactor was then assembled inside Ar-filled glovebox. The setup

was taken outside the glovebox and placed in a fume hood behind a blast shield. The pressure was pressurized with 2.0, 3.0 and 4.0 MPa of CO₂ (>99.995%) and the reaction mixture was stirred at 25 °C. The pressure was checked every 15 minutes and pressurized to the target pressure. After stirring for a total of 2 hours, the reaction vessel was purged with Ar three time to avoid exposure to air. The reaction vessel was sealed under 0.1 MPa of Ar and quickly brought back into the glovebox. In each case, white suspension was obtained, filtrated and washed with super dehydrated MeCN, and dried at 70 °C under vacuum (**Mg-2MPa**: 146.7 mg, **Mg-3MPa**: 169.2 mg, **Mg-4MPa**: 184.4 mg, respectively).

Synthesis of Mg-Et₂O

The synthesis procedure followed that of **Mg-3MPa**, but Et_2O was used instead of MeCN as a synthetic solvent. White fluffy powder was obtained after filtration (166.7 mg).



Characterizations of Zn-CO₂ and Zn-FA

Figure S1. PXRD patterns of $Zn-CO_2$ (blue) and Zn-FA (gray) and the simulated pattern from the CIF file (black).



Figure S2. Solution ¹H NMR spectrum of the **Zn-CO₂** sample digested in DMSO- d_{6} .



Figure S3. Solution ¹¹B NMR spectrum of the **Zn-CO₂** sample digested in DMSO- d_6 .



Figure S4. Solution ¹³C NMR spectrum of the **Zn-CO₂** sample digested in DMSO- d_6 .



Figure S5. IR spectra of Zn-CO₂ (blue) and Zn-FA (gray).



Figure S6. TGA profiles of **Zn-CO**₂ and **Zn-FA** under Ar flow.



Figure S7. CO₂ isotherms at 195 K for **Zn-CO₂** (blue circle) and **Zn-FA** (gray square).



Figure S8. Adsorption uptake amounts of N₂ at 77 K and CO₂ at 195 K for **Zn-CO₂** (blue) and **Zn-FA** (gray).



Figure S9. SEM images of $\textbf{Zn-CO}_2$ (a, b, c) and Zn-FA (d).

Characterizations of M-CO₂ and Mn-CO₂-Air



Figure S10. Solution ¹¹B NMR spectrum of [NEt₄][BH(OCHO)₃] in DMSO-*d*₆.



Figure S11. ESI-MS of [NEt₄][BH(OCHO)₃] with a negative mode. Calculated [BH(OCHO)₃]⁻: *m/z*: 147.01 (100.0%), 146.01 (24.8%), 148.01 (3.2%), 149.01 (1.2%).



Figure S12. PXRD patterns of $M-CO_2$ (M = Mg²⁺ (red), Mn²⁺ (blue), Fe²⁺ (green), Co²⁺ (purple)). The background peaks from the closed cell represented as a solid triangle.



Figure S13. IR spectra of $M-CO_2$ (M = Mg²⁺ (red), Mn²⁺ (blue), Fe²⁺ (green), Co²⁺ (purple)) under air.



Figure S14. TGA profiles of $M-CO_2$ (M = Mg²⁺ (red), Mn²⁺ (blue), Fe²⁺ (green), Co²⁺ (purple)) under Ar flow.



Figure S15. N₂ isotherms at 77 K for $M-CO_2$ (M = Mg²⁺ (red), Mn²⁺ (blue), Fe²⁺ (green), Co²⁺ (purple)).



Figure S16. CO_2 isotherms at 195 K for **M-CO₂** (M = Mg²⁺ (red), Mn²⁺ (blue), Fe²⁺ (green), Co²⁺ (purple)).



Figure S17. BET surface areas calculated form N_2 adsorption at 77 K for **M-CO₂** (M = Mg²⁺, Fe²⁺, Co²⁺) and reported ones.⁴⁻⁷



Figure S18. Uptake amounts of CO_2 at 195 K for **Mn-CO₂** and reported one.⁸



Figure S19. PXRD patterns of $Mn-CO_2$ -Air (orange) and $Mn-CO_2$ (blue) and the simulated pattern from the CIF file (black).



Figure S20. IR spectra of Mn-CO₂-Air (orange) and Mn-CO₂ (blue) under air.

Characterizations of Mg-XMPa (X = 2, 3, 4)



Figure S21. Images of **Mg-3MPa** during filtration. The sample appearance was similar to that of **Mg-2MPa** and **Mg-4MPa**. After drying, white fine powder was obtained in each case.



Figure S22. PXRD patterns of **Mg-XMPa** (**X** = 2, 3, 4) under Ar. The background peaks from the closed cell represented as solid triangle.



Figure S23. IR spectra of Mg-XMPa (X = 2, 3, 4) under Ar.



Figure S24. TGA profiles of Mg-XMPa (X = 2, 3, 4) under Ar flow.



Figure S25. CO₂ isotherms at 195 K for Mg-XMPa (X = 2, 3, 4).



Figure S26. A correlation between the incremental pore volume in each region (micropore I: orange, micropore II: green, mesopore: purple) against the pressure of CO_2 for the synthesis of **Mg-XMPa** (**X** = 2, 3, 4).



Figure S27. N_2 isotherm at 77 K for **Mg-Et2O**.



Figure S28. The survey on the reported number of Mg–xO complexes (x = 1 to 9) in the CCDC database.



Figure S29. Solution ¹¹B NMR of **Mg-3MPa** (blue) and $[NEt_4][BH(OHCO_3)]$ (gray) in DMSO-*d*₆. The NMR samples were prepared under Ar.



Figure S30. ¹H NMR spectrum of the **Mg-3MPa** digested in D₂O. Integrals are represented (red). The ratio of each species is calculated as $-HCO_2$: $-OCH_3$: CH₃CH₂NH⁻ = 36: 3: 2.



Figure S31. ¹¹B NMR spectrum of the **Mg-3MPa** digested in D_2O .



Figure S32. ¹³C NMR spectrum of the **Mg-3MPa** digested in D_2O .

Scheme S1. Plausible hydrolysis mechanism of $[BH(OCHO)_3]^-$. Dissolution of **Mg-XMPa** in H₂O generates gas bubbles, which is probably H₂ gas.



Figure S33. TGA profiles of **Mg-3MPa** until 900 °C under Ar (blue) and Air (gray). The weight loss at 900 °C are 63.6 (Ar) and 65.5 wt% (Air), respectively.



Figure S34. PXRD patterns of **Mg-3MPa** after the TGA measurements until 900 °C under Ar (blue) and Air (gray) and simulated patterns of MgO and $Mg_3(BO_3)_2$ (black).

	C / %	Η/%	N / %
Mg-2MPa	21.09	2.54	0.88
Mg-3MPa	20.13	2.71	1.00
Mg-4MPa	21.45	3.09	1.40
Mg-3MPa- calculated	20.61	2.78	1.12

Solid-state MAS NMR measurements



Figure S35. Quantitative solid-state ¹H MAS NMR spectrum of **Mg-2MPa**. Deconvolution of ¹H MAS NMR spectrum of **Mg-2MPa**. Solid lines show experimental (red) and simulated (black) spectra, and dash lines show the individual components. A, B, C, D, E peaks at 8.05, 5.53, 3.19, 2.72, 1.00 ppm, respectively.



Figure S36. Quantitative solid-state ¹H MAS NMR spectrum of **Mg-3MPa**. Deconvolution of ¹H MAS NMR spectrum of **Mg-3MPa**. Solid lines show experimental (blue) and simulated (black) spectra, and dash lines show the individual components. A, B, C, D, E peaks at 8.07, 5.60, 3.19, 2.66, 1.01 ppm, respectively.



Figure S37. Quantitative solid-state ¹H MAS NMR spectrum of **Mg-4MPa**. Deconvolution of ¹H MAS NMR spectrum of **Mg-4MPa**. Solid lines show experimental (blue) and simulated (black) spectra, and dash lines show the individual components. A, B, C, D, E peaks at 8.07, 5.63, 3.20, 2.73, 0.99 ppm, respectively.

	8.0 ppm / %	3.2 ppm / %	1.0 ppm / %
Mg-2MPa	65.0	18.4	7.4
Mg-3MPa	61.7	13.5	9.0
Mg-4MPa	60.9	18.0	10.5

Table S2. Quantitative solid-state ¹H NMR results of **Mg-XMPa** (X = 2, 3, 4).



Figure S38. The simulated ¹¹B spectra and their integrals at different quadrupolar coupling constant (C_Q) of 0.4 MHz. The integral from 10 kHz to -10 kHz is 0.1. The spectrum was calculated at magnetic field of 14.1 T and under a MAS frequency of 30 kHz. The ¹¹B pulse length was 3.5 µs and the nutation rf-field was 8.5 kHz. All simulations were run by SIMPSON package.⁹



Figure S39. The simulated ¹¹B spectra and their integrals at different quadrupolar coupling constant (C_Q) of 0.8 MHz. The integral from 10 kHz to -10 kHz is 0.098. The spectrum was calculated at magnetic field of 14.1 T and under a MAS frequency of 30 kHz. The ¹¹B pulse length was 3.5 µs and the nutation rf-field was 8.5 kHz. All simulations were run by SIMPSON package.



Figure S40. The simulated ¹¹B spectra and their integrals at different quadrupolar coupling constant (C_Q) of 3.0 MHz. The integral from 10 kHz to -10 kHz is 0.090. The spectrum was calculated at magnetic field of 14.1 T and under a MAS frequency of 30 kHz. The ¹¹B pulse length was 3.5 µs and the nutation rf-field was 8.5 kHz. All simulations were run by SIMPSON package.



Figure S41. Solid-state ¹¹B MAS NMR spectrum of **Mg-2MPa**.



Figure S42. Solid-state ¹¹B MAS NMR spectrum of **Mg-3MPa**.



Figure S43. Solid-state ¹¹B MAS NMR spectrum of **Mg-4MPa**.



Figure S44. ¹H-¹³C double-CP NMR spectrum of **Mg-3MPa**.



Figure S45. D-HMQC ¹H-¹¹B NMR spectrum of **Mg-3MPa**.



Figure S46. ¹¹B-¹¹B NMR spectrum of **Mg-3MPa**.



Figure 47. Mg K-edge XAS spectra of Mg-3MPa (blue) and [Mg₃(HCO₂)₆].



Figure 48. The crystal structure of [Na(1,2-dimethoxyehane)][BH(OCHO)₃].

Bond	From	То	Distance / Å
C-O/C=O	C1	O2	1.21
	C2	O4	1.21
	C3	O6	1.22
	C3	O5	1.30
	C2	O3	1.31
	C1	O1	1.31
В-О	B1	O3	1.47
	B1	O1	1.49
	B1	O5	1.49
Na-C	Na1	C3	3.16
	Na1	C3	3.24
	Na1	C1	3.26
	Na1	C2	3.33
Na-B	Na1	B1	4.92
	Na1	B1	5.06
	Na1	B1	5.40

Table S3. Selected bond distances in [Na(1,2-dimethoxyehane)][BH(OCHO)₃].



Figure 49. The crystal structure of $K[BH(OCHO)_3]$.

Bond	From	То	Distance / Å
C-O/C=O B-O	C7	O9	1.23
	C8	O10	1.24
	C3	O14	1.24
	C3	O13	1.32
	C7	O5	1.33
	C8	O6	1.33
	B4	O5	1.47
	B4	O13	1.47
	B4	O6	1.49
K-C	K1	C8	3.44
	K1	C8	3.44
	K1	C3	3.48
	K1	C3	3.52
	K1	C7	3.68
К-В	K1	B4	3.59
	K1	B4	3.83
	K1	B4	4.16
	K1	B4	5.49
	K1	B4	5.64
	K1	B4	5.72

Table S4. Selected bond distances in K[BH(OCHO)₃].



Figure S50. Proposed porous network of Mg-3MPa.

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