

## ICDC All-Hands Meeting The Saint Paul Hotel Agenda Monday, August 15, 2016

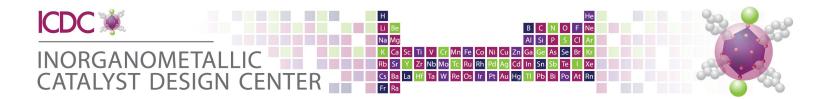
| 7:30 am           | Registration                                                                                                     | Promenade          | All                                                                                                                                                                                                                                                                                      |  |  |
|-------------------|------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|                   | Continental Breakfast Available                                                                                  | Foyer              |                                                                                                                                                                                                                                                                                          |  |  |
| 8:30 am           | <b>Director and Deputy Director</b><br>to meet with Scientific Advisory<br>Board                                 | Summit<br>Room     | Laura Gagliardi, Joe Hupp, Scientific Advisory Board<br>Members                                                                                                                                                                                                                          |  |  |
| 9:00 am           | Director's Welcome                                                                                               | Promenade<br>South | Laura Gagliardi                                                                                                                                                                                                                                                                          |  |  |
|                   | THEME 1 - CATALYSIS AT NU-1000                                                                                   |                    |                                                                                                                                                                                                                                                                                          |  |  |
|                   | (Cl                                                                                                              | nair: Bruc         | e Gates)                                                                                                                                                                                                                                                                                 |  |  |
| 9:10 am           | Introduction, Theme 1                                                                                            | Promenade<br>South | Laura Gagliardi                                                                                                                                                                                                                                                                          |  |  |
| 9:20 am           | Presentation #1                                                                                                  |                    |                                                                                                                                                                                                                                                                                          |  |  |
| Poster No.<br>10  | Tuning the Sites on Metal Oxide-<br>Like MOF Clusters as Supports for<br>Well-Defined Metal Complex<br>Catalysts | Promenade<br>South | Dong Yang, Varinia Bernales, Gamze Gümüşlü, Jun<br>Yu, Timur Islamoglu, Timothy C. Wang, Omar K.<br>Farha, Joseph T. Hupp, Christopher J. Cramer, Laura<br>Gagliardi, Bruce C. Gates                                                                                                     |  |  |
| 9:40 am           | Presentation #2                                                                                                  |                    |                                                                                                                                                                                                                                                                                          |  |  |
| Poster No.<br>09  | Cu-NU-1000: Structural<br>Characterization and<br>Catalytic Activity for Methane<br>Oxidation                    | Promenade<br>South | Jian Zheng, Manuel A. Ortuño, Dale R. Pahls,<br>Takaaki Ikuno, Aleksei Vjunov, Maricruz Sanchez-<br>Sanchez, John L. Fulton, Donald M. Camaioni,<br>Zhanyong Li, Omar K. Farha, Joseph T. Hupp,<br>Christopher J. Cramer, Laura Gagliardi, and<br>Johannes A. Lercher                    |  |  |
| 10:00 am          | Presentation #3                                                                                                  |                    |                                                                                                                                                                                                                                                                                          |  |  |
| Poster No.<br>08  | Oxidative Dehydrogenation of<br>Propane Catalyzed by Co-<br>decorated NU-1000                                    | Promenade<br>South | Zhanyong Li, Manuel A. Ortuño, Varinia Bernales,<br>Aaron W. Peters, Neil M. Schweitzer, Christopher J.<br>Cramer, Laura Gagliardi, Joseph T. Hupp, and Omar<br>K. Farha                                                                                                                 |  |  |
| 10:20 am          | Presentation #4                                                                                                  |                    |                                                                                                                                                                                                                                                                                          |  |  |
| Poster No.<br>N/A | Deposition and Activity of<br>Heterobimetallic Complexes onto<br>NU-1000                                         | Promenade<br>South | Sai P. Desai, Dale R. Pahls, Anthony B. Thompson,<br>Varinia Bernales, Leighanne C. Gallington, Camille D.<br>Malonzo, Thomas Webber, Timothy C. Wang,<br>Zhanyong Li, R. Lee Penn, Andreas Stein, Omar K.<br>Farha, Joseph T. Hupp, Karena W. Chapman, Laura<br>Gagliardi, Connie C. Lu |  |  |
| 10:40 am          | BREAK                                                                                                            | Promenade<br>Foyer | All                                                                                                                                                                                                                                                                                      |  |  |
| 11:00 am          | Presentation #5                                                                                                  | ТОусі              |                                                                                                                                                                                                                                                                                          |  |  |
| Poster No.<br>N/A | Extending Scaling Relationships<br>from Unsupported to Supported<br>Metal Cluster Catalysts                      | Promenade<br>South | <u>Steven Pellizzeri</u> , Varinia Bernales, Pere Miró, Melissa<br>Barona, Randall Q. Snurr, Laura Gagliardi and Rachel<br>B. Getman                                                                                                                                                     |  |  |

| 11:20 am          | Presentation #6                                                                                                                                                                                              |                         |                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poster No.<br>N/A | Hydrogenation and Oligomerization<br>of Ethylene Catalyzed by Transition<br>Metal Oxide Nanoclusters                                                                                                         | Promenade<br>South      | Pere Miró, Peilin Liao, <u>Melissa Barona, Steven</u><br><u>Pellizzeri</u> , Rachel B. Getman, and Randall Q. Snurr                                                                                                                                                                                                                                            |
| 11:40 am          | Conclusions, Theme 1, and<br>Discussion                                                                                                                                                                      | Promenade<br>South      | Joe Hupp                                                                                                                                                                                                                                                                                                                                                       |
| 12:00 pm          | BUFFET LUNCH                                                                                                                                                                                                 | Promenade<br>North      | All                                                                                                                                                                                                                                                                                                                                                            |
|                   | Scientific Advisory Board Members,<br>Students and Postdocs                                                                                                                                                  | Promenade<br>North      | Remain in Promenade North                                                                                                                                                                                                                                                                                                                                      |
|                   | PIs and Faculty Guests                                                                                                                                                                                       | Summit<br>Room          | Mini-buffet provided in the meeting room                                                                                                                                                                                                                                                                                                                       |
|                   |                                                                                                                                                                                                              | TERIAL CH<br>Chair: Lee | IARACTERIZATION<br>Penn)                                                                                                                                                                                                                                                                                                                                       |
| 1:20 pm           | Introduction, Theme 2                                                                                                                                                                                        | Promenade<br>South      | Karena Chapman                                                                                                                                                                                                                                                                                                                                                 |
| 1:30 pm           | Presentation #7                                                                                                                                                                                              |                         |                                                                                                                                                                                                                                                                                                                                                                |
| Poster No.<br>N/A | Evolution of Metal Distribution in<br>Metal-organic Frameworks During<br>Atomic Layer Deposition: Single-<br>site Catalyst Deposition in NU-1000<br>is Directed to Small Pores by<br>Dispersion Interactions | Promenade<br>South      | Leighanne C. Gallington, In Soo Kim, <u>Wei-Guang Liu</u> ,<br>Andrey A. Yakovenko, Ana E. Platero-Prats,<br>Zhanyong Li, Timothy C. Wang, Joseph T. Hupp,<br>Omar K. Farha, Donald G. Truhlar, Alex B.F.<br>Martinson, and Karena W. Chapman                                                                                                                  |
| 1:50 pm           | Presentation #8                                                                                                                                                                                              |                         |                                                                                                                                                                                                                                                                                                                                                                |
| Poster No.<br>N/A | Platinum Atomic Layer Deposition<br>(ALD) in Metal-Organic Framework<br>(MOF) for Ethylene Hydrogenation                                                                                                     | Promenade<br>South      | In Soo Kim, Zhanyong Li, Jian Zheng, Leighanne C.<br>Gallington, <u>Andreas Mavrantonakis</u> , Thomas Webber,<br>Steven Pellizzeri, Nicolaas A. Vermeulen, Rachel<br>Getman, R. Lee Penn, Christopher J. Cramer, Karena<br>W. Chapman, John L. Fulton, Donald M. Camaioni,<br>Johannes A. Lercher, Omar K. Farha, Joseph T.<br>Hupp, and Alex B. F. Martinson |
| 2:10 pm           | Presentation #9                                                                                                                                                                                              |                         |                                                                                                                                                                                                                                                                                                                                                                |
| Poster No.<br>20  | Size and Phase Control of a Metal-<br>Organic Framework                                                                                                                                                      | Promenade<br>South      | Tom Webber, In Soo Kim, Camille Malonzo, Zhao<br>Wang, Wenyang Zhao, Sai Desai, James Moore,<br>Connie Lu, Andreas Stein, Alex B. F. Martinson, Lee<br>Penn                                                                                                                                                                                                    |
|                   | 1                                                                                                                                                                                                            | Promenade               | Chris Cramer                                                                                                                                                                                                                                                                                                                                                   |
| 2:30 pm           | Conclusions, Theme 2, and<br>Discussion                                                                                                                                                                      | South                   |                                                                                                                                                                                                                                                                                                                                                                |

## THEME 3 - ALTERNATIVE MATERIALS AND NOVEL RESEARCH DIRECTIONS (Chair: Alex Martinson)

| 3:00 pm          | Introduction, Theme 3                                                                                         | Promenade<br>South | Andreas Stein                                                                                                                                                                                                                                                                                                           |
|------------------|---------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3:10 pm          | Presentation #10                                                                                              |                    |                                                                                                                                                                                                                                                                                                                         |
| Poster No.<br>04 | Thermal Stabilization of Metal-<br>Organic Framework-Derived<br>Catalytic Single Sites Through<br>Nanocasting | Promenade<br>South | <u>Camille Malonzo</u> , In Soo Kim, Zhanyong Li, Ana-<br>Platero Prats, Leighanne Gallington, Praveen Bollini,<br>Thomas Webber, <u>Hung Pham</u> , Sai Desai, Timothy<br>Wang, Karena Chapman, Alex Martinson, Omar<br>Farha, Joseph Hupp, Connie Lu, Laura Gagliardi, R.<br>Lee Penn, Aditya Bhan, and Andreas Stein |

| 3:30 pm          | Presentation #11                                         |                    |                                                     |
|------------------|----------------------------------------------------------|--------------------|-----------------------------------------------------|
| •                | DFT Study of MOF-Node as                                 | Promenade          | Shuanglin Qu, Bo Yang, Christopher J. Cramer, Don   |
| Poster No.<br>23 | Support for Tungsten Metathesis                          | South              | Truhlar, Laura Gagliardi and Ian Tonks              |
|                  | Catalyst                                                 |                    | _                                                   |
| 3:50 pm          | Presentation #12                                         |                    |                                                     |
|                  | Catalytic Behavior of Few-atom                           | Promenade          | Aaron W. Peters, Jing Xie, Dale Pahls, Zhanyong Li, |
| Poster No.       | Metal Sulfide Clusters Deposited                         | South              | Aaron B. League, Christopher J. Cramer, Laura       |
| N/A              | Within the Metal–Organic                                 |                    | Gagliardi, Omar K. Farha, and Joseph T. Hupp        |
| 4.40             | Framework NU-1000                                        | Duana ana da       | Ower Forke                                          |
| 4:10 pm          | Conclusions, Theme 3, and                                | Promenade<br>South | Omar Farha                                          |
| 4.00             | Discussion                                               |                    |                                                     |
| 4:20 pm          | BREAK                                                    | Promenade          | All                                                 |
| 4:20 pm          |                                                          | Foyer<br>Promenade | All poster presenters                               |
| 4.20 pm          | POSTER SETUP                                             | North              |                                                     |
| 4:40 pm          | Presentations: New Directions                            |                    |                                                     |
| 4:40 pm          | Towards an Understanding of                              | Promenade          | Justin Notestein                                    |
| •                | Supported Metal Oxides and                               | South              |                                                     |
|                  | Sulfides for Chemicals Synthesis                         |                    |                                                     |
| 4:55 pm          | Mechanistic Studies of                                   | Promenade          | Aditya Bhan                                         |
|                  | Heterogeneous Catalytic Systems:                         | South              |                                                     |
|                  | A Case Study on Partial Oxidation                        |                    |                                                     |
| - 40             | of Light Olefins                                         | <u> </u>           |                                                     |
| 5:10 pm          | New Applications of Early Transition                     | Promenade          | lan Tonks                                           |
| 5:25 pm          | Metals in Catalysis<br>Scientific Advisory Board Meeting | South<br>Summit    | Scientific Advisory Board Members only              |
| to               | Scientific Advisory Board Meeting                        | Room               |                                                     |
| 6:00 pm          |                                                          | Room               |                                                     |
| 5:30 pm          | Informal Breakout Session                                | Find a             | Pls only                                            |
| to               |                                                          | Comfortable        |                                                     |
| 6:30 pm          |                                                          | Space              |                                                     |
| 6:00 pm          | Feedback from the Scientific                             | Summit             | Laura Gagliardi, Joe Hupp, Bruce Gates, Chris       |
| to               | Advisory Board to the Executive                          | Room               | Cramer, Omar Farha, Scientific Advisory Board       |
| 6:30 pm          | Committee                                                |                    | Members                                             |
| 6:30 pm          | BUFFET DINNER                                            | Promenade<br>South | All                                                 |
| 8:00 pm          | POSTER SESSION and                                       | Promenade          | Poster session judging by Scientific Advisory Board |
| to               | DESSERT                                                  | North              | members                                             |
| 9:30 pm          |                                                          |                    |                                                     |
| 9:30 pm          | POSTER REMOVAL                                           | Promenade          | All posters must be out of the room immediately     |
| -                |                                                          | North              | following the end of the poster session             |
| 9:30 pm          | Meeting Ends (Day One)                                   |                    |                                                     |



## ICDC All-Hands Meeting The Saint Paul Hotel Agenda <u>Tuesday, August 16, 2016</u>

| 7:30 am  | Registration                                    | Promenade | All                                            |
|----------|-------------------------------------------------|-----------|------------------------------------------------|
|          | Continental Breakfast Available                 | Foyer     |                                                |
| 8:45 am  | Meeting Begins                                  | Promenade | Joe Hupp                                       |
|          | Summary of Day One                              | South     |                                                |
| 9:00 am  | Discussion: Outcome of the Mid-term             | Promenade | Moderator: Connie Lu                           |
|          | Review                                          | South     |                                                |
| 10:00 am | BREAK                                           | Promenade | All                                            |
|          |                                                 | Foyer     |                                                |
| 10:15 am | Discussion: Research Directions for             | Promenade | Moderator: Rachel Getman                       |
|          | Years 3 and 4: High-Throughput; Dow Involvement | South     |                                                |
| 11:15 am | BREAK                                           | Promenade | Box lunches available for pickup for all who   |
|          |                                                 | Foyer     | ordered one                                    |
| 11:30 am | Discussion: Renewal Proposal,                   | Promenade | Moderator: Alex Martinson                      |
|          | Closing Remarks                                 | South     | Poster session prizes announcement             |
| 12:00 pm | Scientific Advisory Board, Director             | Lexington | Laura Gagliardi, Joe Hupp, Scientific Advisory |
| -        | and Deputy Director                             | Room      | Board                                          |
| 12:30 pm | All-Hands Meeting Adjourns                      |           |                                                |