FAME Center 4th Annual Review

POSTER INFORMATION FOR RESEARCHERS

****NOTE: There are 2 components to the poster presentations****

1) Poster

2) Poster Pitch during Technical Review

1) Poster Requirements:

- **Expectation:** Each PI group to present ONE poster.
- **Format/Size:** **Posters should be in PPT format and no larger than 3 feet X 4 feet (any height/length configuration is fine).**
- **Due Date:** Your poster file is due BEFORE the AR meeting date on **Thursday, February 4th, 2016. Please send your poster as a .pdf to Nevin Gabr at ngabr@seas.ucla.edu by this date or it will not be presented at the review.**
- **Printing & Display:** Each student/researcher will be responsible to print his/her own poster slide(s) and to bring them to the review for display. The FAME Center will provide poster backing and adhesive materials. Display of the posters will coincide directly to the theme task numbers. For example, if you are Theme 1 Task 2, then your Poster number will be 1.2. A listing of the various themes, task numbers and associated PIs is attached to the poster information email and contained on page 3 of this document.
- **Logos:** Please include the FAME and STARnet logos on your posters (Provided below)
- **Poster Should Include:**
  a. **Poster Title**
  b. **Researcher Names**
  c. **Institution**
  d. **FAME Theme Affiliation -** Follow the theme/task matrix attached and number your own poster by Theme and task (e.g., Theme 1, task 3 = Poster 1.3)
  e. **Objective**
  f. **Introduction**
  g. **Experimental**
  h. **Results and Discussions**
  i. **Conclusions and Next Steps: Note that our sponsors have specifically requested that each poster include a this information. Please make sure to include this!**

2) Poster Pitch Requirements:

- **Pitch:** It is expected that one student associated with each poster will give a 60 second presentation preview of his/her poster material during the review meeting. This student will present a PPT slide (**template attached-please only use this format**) summarizing the content of his/her poster. Each pitch will begin with the speaker stating his/her name and University. The sponsors want to see an **articulate and condensed presentation of your message.**

- **Presentation Slide:** One slide will be presented during your poster pitch. Please make sure that your presentation slide includes:
  - **Poster Title**
  - **Presenter Name (insert into appropriate section on template)**
  - **University (insert into appropriate section on template)**
  - **FAME Theme Affiliation (insert into appropriate section on template)** Follow the theme/task matrix attached and number your slide in the designated section on the template by Theme and task
  - **Brief Highlights of Results**
- **Presentations will follow the order of the Theme task numbers: Theme 1 Task 1.1 will be 1st, 1.2 will be 2nd and so on.**
- **Pitch Slide is also due Thursday, February 4th to Nevin Gabr at ngabr@seas.ucla.edu**
- **Please consult the latest Annual Review agenda on the website at www.fame-nano.org for the timing of your presentation. Presenters will be required to gather near the conference stage/podium at the doorway at these times. Note that poster presenters will be required to attend BOTH days of the review on February 16-17, so please plan accordingly. Presenters may depart at 12pm on February 17th.**
- **We are planning two rehearsals to practice these pitch presentations on Tuesday, February 9th and Thursday, February 11th, from approximately 12pm to 2pm (Pacific Time). Please save this time on your calendars. More details will follow.**

Due to requests made by our sponsors, poster content will be made available in advance of the meeting dates. **Please send all poster materials to Nevin Gabr at ngabr@seas.ucla.edu by Thursday, February 4th.**

FAME Task List—Please align your poster number to your Theme and Task number!

This is your poster number!

FAME Center Project List		
	Project Titles	**PI Participants**
Theme 1: Multiferroic & Multifunctional Materials		**LEADER: Charles Ahn (Yale)**
1.1	Correlated Materials Through Ab Initio Design	Chris Marianetti (Columbia)
1.2	Multiferroic Materials and Devices	**Ramamoorthy Ramesh (UCB)**, Caroline Ross (MIT), Jane Chang (UCLA), Charles Ahn (Yale)
1.3	Imaging of Multiferroic Coupling in Complex-oxide Heterostructures at the Nano-scale	Kathryn Moler (Stanford)
1.4	Controlling Mott Transitions Through Strain	**Susanne Stemmer (UCSB)**, Charles Ahn (Yale)
1.5	Integrated Multiferroic Optical Devices	Caroline Ross (MIT)
1.7	Memory Cell/Select Device Elements Using Strongly Correlated Oxide Materials with MIT or MOTT Transition at High Temp	David Lederman (WVU)
1.8	In Situ TEM Metrology Development for Studying Switch Processes and Temperature Measurements	Chris Regan (UCLA)
1.9	First Principles Design and Prediction of Strain Inducted MI Transitions in Correlated Oxides	**Sohrab Ismail-Beigi (Yale)**, Charles Ahn (Yale), Susanne Stemmer (UCSB, David Lederman (WVU)
	Project Titles	**PI Participants**
Theme 2: Multi-metal and Spintronic Materials		**LEADER: Ilya Krivorotov**
2.1	Microwave Nano-oscillators and Majority Logic Gate Based on Spin Hall Effect	Ilya Krivorotov (UCI)
2.2	A 180 Degree Switching of Perpendicular Magnetic Anisotropy PMA Using Dynamic Voltage Strain	Greg Carman (UCLA)
2.3	Dissipation-less Novel Magneto-electric Coupling at Topological Insulator / Ferromagnetic Insulator Interface	Kang L. Wang (UCLA)
2.4	Spin Current Injection from Topological Insulators	Shoucheng Zhang (Stanford)
2.5	Complex Magnetic Oxides for Novel Spintronic Devices	Harold Hwang (Stanford)
2.6	Spin-circuit Models for Spin-orbit Torque and Spin Pumping	Supriyo Datta (Purdue)
2.7	Spin-orbit and Exchange Interactions at Magnetically Active Interfaces	Yaroslav Tserkovnyak (UCLA)
2.8	Room Temperature Topological Insulators	**Charles Ahn (Yale)**, Kang Wang (UCLA), SC Zhang (Stanford)
2.9	High Frequency Investigation of Electronic Properties of Function Accelerated nano-Materials	HongWen Jiang (UCLA), Kang Wang (UCLA), James Bain (CMU)
	Project Titles	**PI Participants**
Theme 3: Van der Waals Materials		**LEADER: Philip Kim**
3.1	Van der Waal Molecular Beam Epitaxy Growth of hBN, Graphene, h-BCN and other 2D Layered Material Systems	Jianlin Liu (UCR)
3.2	Vertical and Lateral Heterogeneous Growth of vdW Materials	Pulickel Ajayan (Rice)
3.3	Quantum Electron Transport Across Atomically Thin Planar vdW Heterostructures	Philip Kim (Harvard)
3.5	Organic/inorganic Hybrid via vdW Template Growth for Sensors with Enhanced Specificity and Sensitivity	Colin Nuckolls (Columbia)
3.6	Phonon Engineering & Energy Conversion in vdW Materials	Alexander Balandin (UCR)
3.7	Quantum Engineered Collective States in vdW Materials	Jeanie Lau (UCR)
3.8	Atomically Thin Multi-functional Integrated Circuits in Wafer Scale	**Jiwoong Park (Cornell)**, P. Ajayan (Rice), P. Kim (Harvard)
	Project Titles	**PI Participants**
Theme 4: Physics, Mechanisms, and Device Prototyping		**LEADER: Roger Lake**
4.1	Application of vdW Materials and Study the Use of TMD (vdW) Materials for High Voltage Applications	H.S.Philip Wong (Stanford)
4.2	Electronic, Thermoelectric, and Vibrational Properties of Few-layer van der Waals Materials for Device Applications	Roger Lake (UCR)
4.4	Two-Dimensional Crystal Heterostructures for Terahertz Applications	Ki Wook Kim (NCSU)
4.6	Room Temperature Spin Hall Effect and Possibility of Topological Currents in Spin-Orbit Coupled Metals	Sayeef Salahuddin (UCB)
4.7	Controlling Correlation for Multifunctional Applications	Ki Wook Kim (NCSU)
4.8	Magnonic Holographic Memory for Information Storage and Data Processing	Alexander Khitun (UCR)
4.10	Predictive Atomistic Modeling of Threshold Switching Materials	**Alejandro Strachan (Purdue)**, Gerhard Klimeck (Purdue)
4.11	Experimental Study of Novel TMD-based Memory and Logic Device Implementations	**Joerg Appenzeller (Purdue)**, Susanne Stemmer (UCSB), KiWook Kim (NCSU)
4.12	High Frequency Measurements of Electro-formation and Switching Processes in Oxide-based RRAM Devices	**James Bain (CMU)**, C. Regan (UCLA)
4.13	Nucleic Acid Memory (NAM)	Will Hughes (Boise State University)

Example: *If you work in Theme 1, task 8, your poster number will be 1.8*