## POSTER TIMETABLE

### Day 1 – Wednesday 26th June (Main hall)

<table>
<thead>
<tr>
<th>Poster number</th>
<th>Poster number</th>
<th>Poster Topic</th>
<th>Presenters</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(paper 70)</td>
<td>Spray zone demarcation in top-spray fluidised bed granulation by droplet detection methods</td>
<td>M. Börner, E. Tsotsas</td>
<td>Otto-von-Guericke University, Magdeburg, Germany</td>
</tr>
<tr>
<td>2</td>
<td>(paper 71)</td>
<td>Transfer of batch fluid bed granulation to a continuous process – Case study</td>
<td>K. Germer&lt;sup&gt;1&lt;/sup&gt;, M. Jacob&lt;sup&gt;2&lt;/sup&gt;, M. Zenker&lt;sup&gt;2&lt;/sup&gt;, G. Eckardt&lt;sup&gt;3&lt;/sup&gt;, B. Wolf&lt;sup&gt;4&lt;/sup&gt;</td>
<td>1 Salutas Pharma GmbH, Germany, Germany, 2 Glatt Ingenieurtechnik GmbH, Germany, 3 Parsum GmbH, Germany, 4 Anhalt University of Applied Sciences, Bernburg, Germany</td>
</tr>
<tr>
<td>3</td>
<td>(paper 72)</td>
<td>Comparison between granules produced by spray drying and dry granulation for the fabrication of ceramic porcelain tiles</td>
<td>F.G. Melchiades&lt;sup&gt;1&lt;/sup&gt;, L.R. Santos&lt;sup&gt;1,2&lt;/sup&gt;, S. Nastri&lt;sup&gt;1&lt;/sup&gt;, A.O. Boschi&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>1 Dept. de Eng. de Materiais, Universidade Federal de São Carlos, Brazil, 2 Programa de Pós-Graduação em Ciência e Engenharia de Materiais, Universidade Federal de São Carlos, Brazil</td>
</tr>
<tr>
<td>4</td>
<td>(paper 73)</td>
<td>Use of reactive wetting as a tool for real-time monitoring of binder distribution during granulation</td>
<td>D. Smrčka, M. Schöngut, F. Štěpánek</td>
<td>Institute of Chemical Technology Prague, Czech Republic</td>
</tr>
<tr>
<td>5</td>
<td>(paper 74)</td>
<td>The rheology of dense granular flows in a disc impeller high shear granulator</td>
<td>M. Khalilitehrani, P.J. Abrahamsson, A. Rasmuson</td>
<td>Chalmers University of Technology, Gothenburg, Sweden</td>
</tr>
<tr>
<td>6</td>
<td>(paper 75)</td>
<td>Upgrading the crush strength of ammonium nitrate prills by coating with limestone or dolomite powder</td>
<td>I. Klimova&lt;sup&gt;1&lt;/sup&gt;, V. Mikli&lt;sup&gt;2&lt;/sup&gt;, T. Kaljuvee&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1 Tallinn University of Technology, Laboratory of Inorganic Materials, Estonia, 2 Tallinn University of Technology, Centre of Materials Research, Estonia</td>
</tr>
<tr>
<td>7</td>
<td>(paper 76)</td>
<td>Effect of impeller design on product homogeneity in high shear wet granulation</td>
<td>Z.M. Mirza&lt;sup&gt;1&lt;/sup&gt;, C. Mangwandi&lt;sup&gt;1&lt;/sup&gt;, G.M. Walker&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>1 Queen's University Belfast, Northern Ireland, UK, 2 University of Limerick, Ireland</td>
</tr>
<tr>
<td>8</td>
<td>(paper 77)</td>
<td>Fluidized bed micro-encapsulation of probiotic microorganisms for animal feeding</td>
<td>V. Oehl, S. Wöltje, H. Falck</td>
<td>Neuhaus Neotec GmbH, Ganderkesee, Germany</td>
</tr>
<tr>
<td>9</td>
<td>(paper 78)</td>
<td>Analysis of the effect of impeller type and speed on the rate and quality of mixing in a high shear mixer</td>
<td>D. Barling&lt;sup&gt;1,2&lt;/sup&gt;, T. Leadbeater&lt;sup&gt;3&lt;/sup&gt;, A. Ingram&lt;sup&gt;4&lt;/sup&gt;, D.A.V. Morton&lt;sup&gt;2&lt;/sup&gt;, J.P.K. Seville&lt;sup&gt;5&lt;/sup&gt;, K. Hapgood&lt;sup&gt;6&lt;/sup&gt;</td>
<td>1 Monash University, Australia, 2 Monash Institute of Pharmaceutical Sciences, Australia, 3 School of Physics and Astronomy, University of Birmingham, U.K., 4 Department of Chemical Engineering, University of Birmingham, U.K., 5 University of Surrey, U.K.</td>
</tr>
<tr>
<td>10</td>
<td>(paper 79)</td>
<td>Influence of viscous forces on collision dynamics in a fluidised bed granulator: A DEM-CFD study</td>
<td>L. Fries&lt;sup&gt;1&lt;/sup&gt;, S. Antonyuk&lt;sup&gt;2&lt;/sup&gt;, S. Heinrich&lt;sup&gt;3&lt;/sup&gt;, G. Niederreiter&lt;sup&gt;1&lt;/sup&gt;, S. Palzer&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1 Nestlé Research Center Lausanne, Switzerland, 2 Hamburg University of Technology, Germany</td>
</tr>
</tbody>
</table>

Updated on 7 June 2013 at 19:11 GMT
<table>
<thead>
<tr>
<th>Poster number</th>
<th>Poster Topic</th>
<th>Presenters</th>
<th>Group</th>
</tr>
</thead>
</table>
| 11 (paper 80) | Glass transition temperature effects on the breakage and dissolution of single amorphous food particles | W.R. Mitchell<sup>1</sup>, C.I. Haider<sup>1</sup>, B. Onasile<sup>1</sup>, T.O. Althaus<sup>2</sup>, L. Forny<sup>3</sup>, G. Niederreiter<sup>4</sup>, S. Palzer<sup>4</sup>, M.J. Hounslow<sup>1</sup>, A.D. Salman<sup>1</sup> | <sup>1</sup>University of Sheffield, UK  
<sup>2</sup>Nestlé Product Technology Center York, UK  
<sup>3</sup>Nestlé Research Center, Lausanne Switzerland  
<sup>4</sup>Nestlé SA Headquarters, Vevey, Switzerland |
| 12 (paper 81) | Experimental and numerical investigations of a spout fluidized bed with draft plates | V.S. Sutkar<sup>1</sup>, N.G. Deen<sup>1</sup>, V. Salikov<sup>2</sup>, S. Antonyuk<sup>2</sup>, S. Heinrich<sup>2</sup>, J.A.M. Kuipers<sup>1</sup> | <sup>1</sup>Eindhoven University of Technology, The Netherlands  
<sup>2</sup>Hamburg University of Technology, Germany |
| 13 (paper 82) | Granulation of indomethacin and hydrophilic carrier by fluidized hot melt method: The drug solubility enhancement | T.C. Andrade, R.M. Martins, L.A. P. Freitas | Universidade de São Paulo, Brazil |
| 14 (paper 83) | Continuum modeling of particle flows in high shear granulation | P.J. Abrahamsson<sup>1</sup>, M. Khalilitehrani<sup>1</sup>, S. Sasie<sup>2</sup>, A. Rasmussen<sup>1</sup> | <sup>1</sup>Department of Chemical Engineering, Chalmers University of Technology, Göteborg, Sweden  
<sup>2</sup>Department of Applied Mechanics: Division of Fluid Dynamics, Chalmers University of Technology, Göteborg, Sweden |
| 15 (paper 84) | Improvement of enalapril maleate chemical stability by high shear melting granulation | A.P.M. Oliveira<sup>1</sup>, T.A. Cunha<sup>1</sup>, R.C. Serpa<sup>1</sup>, S.F. Taveira<sup>1</sup>, E.M. Lima<sup>1</sup>, L.A.P. Freitas<sup>2</sup>, R.N. Marreto<sup>1</sup> | <sup>1</sup>Federal University of Goiás, Goiânia, Brazil  
<sup>2</sup>University of São Paulo, Brazil |
| 16 (paper 85) | Effect of type of lactose and microcrystalline cellulose combination on recompaction | J. Langridge, E. Camelot-Nijman, R. Shegokar, H. van Duinen, M. Lindner | DFE Pharma, Goch, Germany |
| 17 (paper 86) | Wettability study of glass beads bed by capillary rise with pressure increase | M. Benali, K. Saleh | Université de Technologie de Compiègne, France |
| 18 (paper 87) | Measuring caking degree in cocoa powders: A material science approach | E. Chávez Montes, V. Girard, J.C. Gumy | Nestlé PTC Orbe, Switzerland |
| 19 (paper 88) | Comparison of the effect of ultrasound and an electronic anti fouling system on the aggregation and scaling behaviour of calcium carbonate by an inline technique | W.N. Al Nasser<sup>1</sup>, K. Pitt<sup>2</sup>, F.H. Al Salhi<sup>1</sup>, A.M. Al Mofleh<sup>1</sup>, M.J. Hounslow<sup>2</sup>, A.D. Salman<sup>2</sup> | <sup>1</sup>Saudi Aramco, Dhahran, Saudi Arabia  
<sup>2</sup>University of Sheffield, UK |
| 20 (paper 89) | Blade - granule bed stress in a cylindrical high shear granulator: Further characterisation with DEM | E.L. Chan<sup>1</sup>, G.K. Reynolds<sup>2</sup>, B. Gururajan<sup>3</sup>, M.J. Hounslow<sup>1</sup>, A.D. Salman<sup>1</sup> | <sup>1</sup>University of Sheffield, UK  
<sup>2</sup>AstraZeneca, Macclesfield, Cheshire, UK  
<sup>3</sup>AstraZeneca R&D, Mölndal, Sweden |
<table>
<thead>
<tr>
<th>Poster number</th>
<th>Poster Topic</th>
<th>Presenters</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 (paper 90)</td>
<td>The influence of the pan pelletizer rotational speed and the binder concentration on the agglomeration of alumina oxide granules</td>
<td>Z. Radeva, A. Hameed, P. Müller, J. Tomas</td>
<td>Otto von Guericke University, Magdeburg, Germany</td>
</tr>
<tr>
<td>22 (paper 91)</td>
<td>Improved control of granule properties via “steady state” granulation</td>
<td>R.F.T. Moo, C. Selomulya, K.P. Hapgood</td>
<td>Monash University, Australia</td>
</tr>
<tr>
<td>23 (paper 92)</td>
<td>Study of soy protein isolate agglomeration in a pulsed fluidized bed using gum arabic as binder agent</td>
<td>V.G. Machado, T.A.M. Hirata, F.C. Menegalli</td>
<td>University of Campinas - SP, Brazil</td>
</tr>
<tr>
<td>24 (paper 93)</td>
<td>Optimizing the properties of blend for hard gelatin capsules filling by incorporating roller compaction in manufacturing process</td>
<td>D. Majerová, M. Bartáková, D. Hofmanová, T. Rysl, F. Štěpánek, P. Zámostný</td>
<td>1 Institute of Chemical Technology, Prague, Czech Republic 2 Zentiva k.s. (a Sanofi company), Prague, Czech Republic</td>
</tr>
<tr>
<td>25 (paper 94)</td>
<td>Effect of raw material properties on the kinetics of iron ores granulation</td>
<td>R.A. Jaimes, F. Van Loo, J-F Douce, M. Schöngut, M. Evrard, F. Štěpánek, E. Pirard</td>
<td>1 Centre for Research in Metallurgy, Liège, Belgium 2 ArcelorMittal Ironmaking, Global R&amp;D</td>
</tr>
<tr>
<td>26 (paper 95)</td>
<td>Twin screw granulator: Effect of primary particle size</td>
<td>R.B. Al-Asady, M.J. Hounslow, A.D. Salman</td>
<td>University of Sheffield, UK</td>
</tr>
<tr>
<td>27 (paper 96)</td>
<td>Evaluating the solid surface free energy of amorphous maltodextrin</td>
<td>M. Balashannugam, C.I. Haider, M.J. Hounslow, A.D. Salman</td>
<td>University of Sheffield, UK</td>
</tr>
<tr>
<td>28</td>
<td>A “unit cell” approach for extracting macroscopic coalescence and breakage kernels from DEM simulations</td>
<td>N.J. Davis, C. Wassgren, J. Litster</td>
<td>1 Department of Chemical Engineering, Purdue University, USA 2 Department of Mechanical Engineering, Purdue University, USA 3 Department of Industrial and Physical Pharmacy, Purdue University, USA</td>
</tr>
<tr>
<td>29</td>
<td>Investigation of the effect of Mg silicate addition on the powder physical properties of compacted metformin-HCl</td>
<td>I.S. Rashid, K.A. Alkhamsis, H.A. Hassan, T.H. Altalafha, A.A. Badwan</td>
<td>1 The Jordanian Pharmaceutical Manufacturing Co., Naor, Jordan 2 Jordan University of Science and Technology, Iribid, 22110, Jordan</td>
</tr>
<tr>
<td>30</td>
<td>DEM simulation of contact interactions of micrometer-sized particles</td>
<td>S. Kozhar, S. Antonyuk, S. Heinrich, L. Gilson, U. Bröckel</td>
<td>1 Hamburg University of Technology, Germany 2 Institute for Micro-Process-Engineering and Particle Technology, Birkenfeld, Germany</td>
</tr>
<tr>
<td>31</td>
<td>Envisioning the factory of the future: Case study on continuous granulation and tableting</td>
<td>K. Schoeters</td>
<td>GEA Pharma Systems, Wommelgem, Belgium</td>
</tr>
<tr>
<td>32</td>
<td>One step fluidized bed drying and encapsulation of a herbal extract</td>
<td>L. Benelli, C.R.F. Souza, W.P. Oliveira</td>
<td>University of São Paulo, Brazil</td>
</tr>
<tr>
<td>Poster number</td>
<td>Poster Topic</td>
<td>Presenters</td>
<td>Group</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>33</td>
<td>Roller compaction/ comparison of ribbon and granule properties using different types of lactose</td>
<td>C.S. Omar¹, J.D. Osborne¹, T. Althaus², S. Palzer³, M.J. Hounslow¹, A.D. Salman¹</td>
<td>¹University of Sheffield, UK  ²Nestlé Product Technology Centre York, UK</td>
</tr>
<tr>
<td>34</td>
<td>A quality by design approach to investigate the effect of mannitol and dicalcium phosphate qualities on roll compaction</td>
<td>N. Souihi¹, M. Dumarey², H. Wikström³, P. Tajarobi², M. Fransson³, O. Svensson³, M. Josefson³, J. Trygg¹</td>
<td>¹Department of Chemistry, Umeå University, Sweden  ²Industrial Doctoral School, Umeå University, Sweden  ³AstraZeneca R&amp;D Mölndal, Sweden</td>
</tr>
<tr>
<td>35</td>
<td>Powder flow characterisation of pharmaceutical excipients: evaluation of different techniques</td>
<td>N. Sandler¹, B. Gururajan², H. Ehlers³, M. Fransson², L. Johnson², P. Tajarobi²</td>
<td>¹Abo Akademi University, Finland  ²AstraZeneca R&amp;D, Mölndal, Sweden</td>
</tr>
<tr>
<td>36</td>
<td>In-line measurement of the agglomerate size distribution in fluidized bed agglomeration</td>
<td>C. Aviles-Aviles¹,²,³, M. Terray⁴, E. Dumoulin¹,²,³, C. Turchiuli¹,²,³</td>
<td>¹AgroParisTech, Massy, France  ²INRA, Massy, France  ³CNAM, Massy, France  ⁴Malvern Instruments SA, France</td>
</tr>
<tr>
<td>37</td>
<td>A combined experimental and modelling investigation of the impact of powder properties</td>
<td>C.A. Kastner, G.P.E. Brownbridge, S. Mosbach, M. Kraft</td>
<td>University of Cambridge, United Kingdom</td>
</tr>
<tr>
<td>38</td>
<td>A validated flowsheeting tool for the study of industrial granulation processes</td>
<td>I.M. Cotabarren, D.E. Bertín, V. Bucalá, J. Piña</td>
<td>Universidade Nacional del Sur, Bahía Blanca, Argentina</td>
</tr>
<tr>
<td>39</td>
<td>Discrete Element Modelling of elastic bending of ceramic-polymer beams generated by spouted bed spray granulation</td>
<td>M.F.H. Wolff¹, V. Salikov¹, S. Antonyuk¹, S. Heinrich¹, G.A. Schneider²</td>
<td>¹Institute of Solids Process Engineering and Particle Technology, Hamburg, Germany  ²Institute of Advanced Ceramics, Hamburg, Germany</td>
</tr>
<tr>
<td>40</td>
<td>Movement of secondary immiscible liquid into a suspension of hydrophilic particles in a continuous hydrophobic phase</td>
<td>S.F. Islam¹, S. Whitehouse², R. Sundara², T.O. Althaus², S. Palzer³, M.J. Hounslow¹, A.D. Salman¹</td>
<td>¹University of Sheffield, UK  ²Nestlé Product Technology Centre, York, UK  ³Nestlé SA Headquarters, Vevey, Switzerland</td>
</tr>
<tr>
<td>41</td>
<td>A novel non-intrusive particle tracking measurement technique for dense granular flows</td>
<td>J. Neuwirth¹, S. Heinrich¹, M. Jacob²</td>
<td>¹Hamburg University of Technology, Germany  ²Glatt Ingenieurtchnik GmbH, Germany</td>
</tr>
<tr>
<td>42</td>
<td>Textural analysis of the surface of a bed of powder as a tool to investigate agglomeration mechanisms</td>
<td>C. Codemo¹, R. Artoni², N. Realdon¹, E. Franceschinis¹, A.C. Santomaso²</td>
<td>¹Dept. of Pharmaceutical and Pharmacological Sciences, Padova, Italy  ²Dept. of Industrial Engineering, Padova, Italy</td>
</tr>
<tr>
<td>Poster number</td>
<td>Poster Topic</td>
<td>Presenters</td>
<td>Group</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>43</td>
<td>A combined experimental and computational analysis of the effect of powder and granule properties on tablet compaction characteristics</td>
<td>S. Oka&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1 Rutgers, The State University of New Jersey, USA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O. Kaspar&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V. Tokarova&lt;sup&gt;2&lt;/sup&gt;</td>
<td>2 Institute of Chemical Technology, Prague, Czech Republic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D. Barrasso&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A. Chaudhury&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>K. Sowrirajan&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>F. Stepanek&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>R. Ramachandran&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>Development and evaluation of a novel pharmaceutical excipient by co-processing of microcrystalline cellulose and magnesium silicate by roller compaction</td>
<td>O.M. Bouder&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1 University of Jordan, Amman, Jordan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I.S. Rashid&lt;sup&gt;2&lt;/sup&gt;</td>
<td>2 The Jordanian Pharmaceutical Manufacturing Co., Naor, Jordan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.M. Al Omari&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A.A. Badwan&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>H.S. Al Khatib&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Agglomeration of particles in oil-continuous suspensions driven by liquid bridges</td>
<td>A.A. Negreiros&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1 University of Sheffield, UK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T.O. Althaus&lt;sup&gt;2&lt;/sup&gt;</td>
<td>2 Nestlé PTC York, UK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G. Niederreiter&lt;sup&gt;3&lt;/sup&gt;</td>
<td>3 Nestlé SA, Vevey, Switzerland</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S. Palzer&lt;sup&gt;3&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.J. Hounslow&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A.D. Salman&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>
## POSTER TIMETABLE

**Day 2 – Thursday 27th June (Main hall)**

<table>
<thead>
<tr>
<th>Poster number</th>
<th>Poster Topic</th>
<th>Presenters</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>Implementation of small scale continuous wet granulation in the pharmaceutical industry</td>
<td>J. Robertson</td>
<td>GlaxoSmithKline R+D, Harlow, UK</td>
</tr>
</tbody>
</table>
| 47            | Lipid microspheres manufactured by prilling process: From raw materials properties to the final product | F. Séquier \(^1,2\)  
V. Faiivre \(^1\)  
G. Daste \(^2\)  
M. Renouard \(^2\)  
S. Lesieur \(^1\)  
1 University Paris-Sud, Châtenay Malabry, France  
2 Sanofi, Carbon Blanc Cedex, France | Otto-von-Guericke University  
Magdeburg, Germany |
| 48            | Experimental and numerical investigation on the compression behaviour of tetrahedral agglomerates | P. Mueller  
H. Glöckner  
J. Tomas | Otto-von-Guericke University  
Magdeburg, Germany |
| 49            | Stochastic Modelling of fluidised bed spray agglomeration tracking particle structure | M. Dernedde \(^1\)  
M. Peglow \(^2\)  
E. Tsotsas \(^3\)  
1 Otto-von-Guericke University, NaWiTec, Magdeburg, Germany  
2 IPT Pergande GmbH, Germany  
3 Otto-von-Guericke University, Magdeburg, Germany | Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Dresden, Germany |
| 50            | Influence of internal structure parameters and additives on the mechanical properties of spray dried granules | S. Eckhard  
M. Fries | Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Dresden, Germany |
| 51            | Granulation of ultra-fine powders: tracking changes in granular microstructure using XRCT | N.B. Davis \(^1\)  
S.A. Dale \(^2\)  
K. Waibel \(^1\)  
J.D. Litster \(^1,2\)  
1 Department of Chemical Engineering, Purdue University, USA  
2 Department of Industrial and Physical Pharmacy, Purdue University, USA  
3 School of Mechanical Engineering, Purdue University, USA | Otto-von-Guericke University, NaWiTec, Magdeburg, Germany |
| 52            | Evaluation of compacted preparations comprising binary mixtures of starch and magnesium silicate with model low strength water soluble drugs | F.T. Al- Akayleh \(^1\)  
Z.K. Al-Qaysi \(^1\)  
M.S. Shubair \(^1\)  
I.S. Rashid \(^2\)  
A.A. Badwan \(^3\)  
1 Petra University, Jordan  
2 The Jordanian Pharmaceutical Manufacturing Co. Naor, Jordan  
3 Retsch Technology GmbH, Germany | Otto-von-Guericke University, NaWiTec, Magdeburg, Germany |
| 53            | Dynamic image analysis offers new applications in production and quality control | G. Beckmann \(^1\)  
J. Ayar \(^2\)  
1 Retsch Technology GmbH, Germany  
2 Retsch UK Ltd, Castleford, UK | Johannes Gutenberg-University of Mainz, Germany  
2 Hüttlin GmbH – A Bosch Packing Technology Company, Schopfheim, Germany |
| 54            | Effect of process parameters during high-shear granulation on the content uniformity of resulting low dose tablets | S. Kindgen \(^1\)  
M. Knoll \(^2\)  
U. Schmidt \(^3\)  
J. Müller \(^2\)  
P. Langguth \(^1\)  
1 Johannes Gutenberg-University of Mainz, Germany  
2 Hüttlin GmbH – A Bosch Packing Technology Company, Schopfheim, Germany | Johannes Gutenberg-University of Mainz, Germany  
2 Hüttlin GmbH – A Bosch Packing Technology Company, Schopfheim, Germany |
| 55            | The application of a materials science-based approach for drug product design and understanding | P.A. Trusty | GlaxoSmithKline, Global Manufacturing & Supply, Ware, UK |
| 56            | Investigation of the particle surface in fluidized bed spray granulation | T. Hoffmann  
A. Bück  
E. Tsotsas | NaWiTec, Otto von Guericke University Magdeburg, Germany |

Updated on 7 June 2013 at 19:11 GMT
<table>
<thead>
<tr>
<th>Poster number</th>
<th>Poster Topic</th>
<th>Presenters</th>
<th>Group</th>
</tr>
</thead>
</table>
| 57            | Characterization of particles' motions of a granular bed in a low shear mixing device | S. Mandato<sup>1</sup>  
B. Cuq<sup>1</sup>  
T. Ruiz<sup>2</sup> | 1 U.M.R. IATE – Montpellier  
France  
2 U.M.R. IATE – Université Montpellier France |
| 58            | Development of a growth regime map for a novel reverse-phase wet granulation process | J.B. Wade<sup>1,2</sup>  
G.P. Martin<sup>1</sup>  
D.F. Long<sup>2</sup> | 1 King's College London, UK  
2 Eli Lilly and Company, Indianapolis, USA |
| 59            | Quantify the influence of interparticle cohesive force on fluidization        | J. Ma  
D. Liu  
X. Chen | Southeast University, Nanjing, P.R.China |
| 60            | Continuous melt granulation: Influence of process and formulation parameters on granule attributes | T. Monteyne<sup>1</sup>  
J.P. Remon<sup>2</sup>  
C. Vervaet<sup>2</sup>  
T. De Beer<sup>1</sup> | 1 Laboratory of Pharmaceutical Process Analytical Technology, Ghent University, Belgium  
2 Laboratory of Pharmaceutical Technology, Ghent University, Belgium |
| 61            | One dimensional model for the prediction of residence time distribution granulation in a twin-screw granulator | A. Kumar<sup>1,2</sup>  
K.V. Gernaey<sup>3</sup>  
T. De Beer<sup>2</sup>  
I. Nopens<sup>1</sup> | 1 Dept. of Mathematical Modelling, Statistics and Bioinformatics, Ghent University, Belgium  
2 Dept. of Pharmaceutical Analysis, Ghent University, Belgium  
3 Technical University of Denmark, Kongens Lyngby, Denmark |
| 62            | A comparison of granule properties between impeller slash in high shear mixer and screw rotation in twin screw extruder | Z. Wang  
M.J. Hounslow  
A.D. Salman | University of Sheffield, UK |
| 63            | Designing fix-bed reactor for esterification using ion-exchange resin as catalyst | S. Ralebhat,  
S. Boite  
S.B. Shinde | Sir Parasurambhau College, Pune, India |
| 64            | Adsorption of nanoparticles on sugars using fluid bed drying                 | R. Shegokar<sup>1,2</sup>  
K.K. Singh<sup>1</sup> | 1 Freie Universität Berlin, Germany  
2 C.U. Shah College of Pharmacy, SNDT University, Mumbai, India |
| 65            | Agglomeration of wet granular material during dense flow                     | N. Berger<sup>1,2</sup>  
E. Azema<sup>1</sup>  
F. Radjai<sup>1</sup>  
J-F. Douce<sup>2</sup> | 1 Laboratoire de Université Montpellier II, France  
2 ArcelorMittal Maizières Research, Maizières-lès-Metz, France |
| 66            | Drug form kinetics as a function of high shear wet granulation captured using online Raman spectroscopy | J.R. Brown  
X. Dai  
A.B. Dennis  
J.W. Jones  
P.J. Reddy  
W.E. Sinclair  
P. Timmins | Bristol Myers Squibb Research & Development, Moreton, UK |
| 67            | Comparison of two different fiber optic probes for the in-line NIR based granule moisture assessment in the drying unit of a continuous pharmaceutical tabletting process | M. Fonteyne<sup>1</sup>  
J. Arruabarrena<sup>2</sup>  
J. Vercruysse<sup>3</sup>  
C. Vervaet<sup>3</sup>  
J.P. Remon<sup>3</sup>  
T. De Beer<sup>1</sup> | 1 Laboratory of Pharmaceutical PAT, Ghent University, Belgium  
2 Universitat Autònoma de Barcelona, Spain  
3 Laboratory of Pharmaceutical Technology, Ghent University, Belgium |
<table>
<thead>
<tr>
<th>Poster number</th>
<th>Poster Topic</th>
<th>Presenters</th>
<th>Group</th>
</tr>
</thead>
</table>
| 68            | Novel approach for interpreting powder flow behaviour using powder adhesion and cohesion plots | B. Gururajan<sup>1</sup>  
N. Sewell<sup>2</sup>  
G. Reynolds<sup>2</sup> | 1<sup>AstraZeneca R&D, Mölndal, Sweden  
2<sup>AstraZeneca R&D, Macclesfield, United Kingdom</sup> |
| 69            | Continuous wet granulation - A robust granulation technique for challenging active pharmaceutical ingredients | I. Yadav  
J. Crooks  
R. Patel  
J. Robertson  
M. Ghirardi | GlaxoSmithKline R&D, Harlow, UK, |
| 70            | Hot-melt coating of hydrosensitive products                                 | C. Pacheco<sup>1</sup>  
A. Khoufech<sup>1</sup>  
J. Piña<sup>2</sup>  
K. Saleh<sup>1</sup> | 1<sup>Université de Technologie de Compiègne, France  
2<sup>PLAPIQUI (UNS – CONICET, Bahía Blanca, Argentina</sup> |
| 71            | Dimensional analysis of milk concentrates spraying                          | J. Petit<sup>1,4,5</sup>  
S. Méjean<sup>2</sup>  
L. Galet<sup>3</sup>  
P. Accart<sup>3</sup>  
P. Schuck<sup>3</sup>  
G. Delaplace<sup>4</sup>  
R. Jeantet<sup>5</sup> | 1<sup>Université de Lorraine, France  
2<sup>Bionov, France  
3<sup>Université de Toulouse, France.  
4<sup>INRA, UR638, PIHM, France  
5<sup>Agrocampus Ouest, INRA, UMR1253, STLO, Rennes, France</sup> |
| 72            | Development of appropriate granulation techniques for a novel agrochemical granule formulation with built-in adjuvant | A. Batra  
H. Dave  
M. Logan  
D. Linscott  
D. Williams  
R. Boucher  
L. Liu  
L. Aulisa | Dow AgroSciences, Indianapolis, USA |
| 73            | Study on the influence of granulation process parameters on tablet properties using transmission and backscattering Raman and transmission NIR | E. Peeters<sup>1</sup>  
M. Toiviainen<sup>2</sup>  
J. Van Renterghem<sup>3</sup>  
A.F. Silva<sup>3</sup>  
M. Fonteyne<sup>3</sup>  
T. De Beer<sup>3</sup>  
C. Vervaet<sup>1</sup>  
J.P. Remon<sup>1</sup> | 1<sup>Laboratory of Pharmaceutical Technology, Ghent University, Belgium  
2<sup>VTT Technical Research Centre of Finland, Kuopio/Oulu, Finland  
3<sup>Laboratory of Pharmaceutical Process Analytical Technology, Ghent University, Belgium</sup> |
| 74            | Investigation into the granulation of nanoparticles using scanning electron microscopy and focussed ion beam techniques | S.J. Dempsey<sup>1</sup>  
L. Bowen<sup>2</sup>  
M. Szablewski<sup>1</sup>  
D. Atkinson<sup>1</sup> | 1<sup>Department of Physics, Durham University, UK  
2<sup>Durham Microscopy Facility, Durham University, UK</sup> |
| 75            | Electrostatics effect on bed pressure fluctuation during fluidization of pharmaceutical particles | L. Benelli  
C.R.F. Souza  
W.P. Oliveira | University of São Paulo, Brazil |
| 76            | Optimisation of granule size in pulsed spray fluidised bed granulation using the box-behnken experimental design | H. Liu  
K. Wang  
W. Schindwein  
M. Li | De Montfort University, Leicester, UK |
<table>
<thead>
<tr>
<th>Poster number</th>
<th>Poster Topic</th>
<th>Presenters</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>77</td>
<td>Study of powder extrusion on a small-scale experimental set-up: Influence of formulation</td>
<td>F. Cavaillès, F. Sardou, S. Hoppe, V. Falk</td>
<td>Université de Lorraine, Nancy, France</td>
</tr>
<tr>
<td>78</td>
<td>Using DEM as a tool for the development of population balance kernels</td>
<td>R.M. Smith</td>
<td>The University of Sheffield, UK</td>
</tr>
<tr>
<td>79</td>
<td>Scaling up of Na$_2$WO$_4$-Mn/SiO$_2$ catalyst synthesis</td>
<td>U. Simon$^1$, M. Wiedemann$^1$, S. Sadjadi$^2$, S. Arndt$^3$, O. Görke$^1$</td>
<td>1 Institute for Material Science and Technologies, Technische Universität Berlin, Germany 2 Chair of Process Dynamics and Operation, Technische Universität Berlin, Germany 3 Department of Chemistry, Technische Universität Berlin, Germany</td>
</tr>
<tr>
<td>80</td>
<td>Foam as a new binder for powder granulation: Rheology approach, granules properties and effect of gelling products</td>
<td>G. Lefebvre, D. Oulahna, A. de Ryck, A. Michrafy</td>
<td>Université de Toulouse, France</td>
</tr>
<tr>
<td>81</td>
<td>Melt granulation: Effects of operating variables on particles growth mechanisms</td>
<td>S. Veliz, I. Cotabarren, D. Bertín, J. Piña, M. Pedernera, V. Bucalá</td>
<td>PLAPIQUI, Universidad Nacional del Sur, Bahía Blanca, Argentina</td>
</tr>
<tr>
<td>82</td>
<td>Process parameters selection for end-use products and scale-up of fluid bed wet granulation and drying</td>
<td>S. Martin$^1$, C. Gabaude-Renou$^2$, M. Berger$^3$, J-R. Authelin$^4$</td>
<td>1 SCoPT consulting, Trevoux, France 2 Sanofi, Pharmaceutical Sciences Department, Montpellier, France 3 Sanofi, Clinical &amp; Scientific Operations, Montpellier, France 4 Sanofi, Pharmaceutical Sciences Department, Vitry-sur-Seine, France</td>
</tr>
<tr>
<td>83</td>
<td>Design space estimation of the roller compaction process</td>
<td>N. Souihi$^1$,$^2$, M. Josefson$^3$, P. Tajarobi$^3$, B. Gururajan$^3$, J. Trygg$^4$</td>
<td>1 Department of Chemistry, Umeå University, Sweden 2 Industrial Doctoral School, Umeå University, Sweden 3 Pharmaceutical Development, AstraZeneca R&amp;D Malmö, Sweden</td>
</tr>
<tr>
<td>84</td>
<td>Architecture of the multiscale simulation environment for modelling of fluidized bed granulation</td>
<td>M. Dosta, S. Heinrich</td>
<td>Hamburg University of Technology, Germany</td>
</tr>
<tr>
<td>85</td>
<td>The development of a controlled release preparation comprising metronidazole and compacted hydrophilic binary polymer matrix of chitosan and xanthan gum</td>
<td>I.S. Rashid$^1$, K.A. Alkhamis$^2$, T.H. Altalafha$^1$, H.A. Hassan$^1$, A.A. Badwan$^1$</td>
<td>1 The Jordanian Pharmaceutical Manufacturing Co., Naor, Jordan 2 Jordan University of Science and Technology, Irbid, Jordan</td>
</tr>
<tr>
<td>Poster number</td>
<td>Poster Topic</td>
<td>Presenters</td>
<td>Group</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 86            | Assessment of single particle contact mechanisms and cohesion under controlled temperature and humidity | C.I. Haider\(^1\)  
T.O. Althaus\(^2\)  
G. Niederreiter\(^3\)  
S. Palzer\(^3\)  
M.J. Hounslow\(^1\)  
A.D. Salman\(^1\) | 1 University of Sheffield, UK  
2 Nestlé Product Technology Centre, UK  
3 Nestlé SA Headquarters, Vevey, Switzerland |
| 87            | Critical assessment of the unified compaction curve model                     | J. Mosig  
P. Kleinebudde                                                       | Heinrich-Heine-University, Duesseldorf, Germany                       |
| 88            | Flow pattern and stability analysis in pneumatic conveying of pulverized coal in an industrial-scale horizontal pipe | X. Guo  
H. Lu  
K. Xie  
X. Gong | East China University of Science and Technology, Shanghai, China |
| 89            | Assessment of granule parameters for implementation in process monitoring and control of twin screw wet granulation using high speed imaging | A.S. El Hagrasy\(^1\)  
P. Cruise\(^2\)  
I. Jones\(^2\)  
J.D. Litster\(^1,3\) | 1 School of Chemical Engineering, Purdue University, USA  
2 Innopharma Labs, Sandyford, Ireland  
3 Department of Industrial and Physical Pharmacy, Purdue University, USA |
| 90            | Semi-solid binder dispersion in detergent agglomeration                       | M. Balashanmugam\(^1\)  
A.E. Bayly\(^2\)  
Y.S. Cheong\(^2\)  
M.J. Hounslow\(^1\)  
A.D. Salman\(^1\) | 1 University of Sheffield, UK  
2 Procter and Gamble, Beijing Innovation Centre, China |

Updated on 7 June 2013 at 19:11 GMT