

Willy Kracht G, PhD

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Chemical Engineer and Master in Extractive Metallurgy from Universidad de Chile. PhD in Mining and Materials Engineering from McGill University, Canada. Areas of interest: froth flotation, mineral processing, geometallurgy, process engineering and process modeling.

Education

PhD in Mining and Materials Engineering McGill University, Montreal, Quebec, Canada	2005-2008
Master in Engineering Sciences, Extractive Metallurgy Universidad de Chile, Santiago, Chile	2003-2004
Chemical Engineer Universidad de Chile, Santiago, Chile	1997-2003

Work history

Universidad de Chile: Assistant Professor Deputy Head of the Department of Mining Engineering (2012 to date). Coordinator of the PhD Program in Mining Engineering (2012 to date). Teaching undergraduate and graduate courses in mineral concentration, mineral processing fundamentals, metallurgical physical-chemistry. Participation in specialization courses (diploma) in flotation, mineral processing, and geometallurgy.	May 2005 to date
Advanced Mining Technology Center (AMTC): Sub-Director, PI Sub-Director of the Center (since March 2013), and Principal Investigator (PI) in the Group of Mineral Processing and Extractive Metallurgy. Applied research, studies and specialized services on extractive metallurgy and mineral processing.	2011 to date
Mineral Processing Lab (U.Chile): Chief of the Laboratory Research, studies and services on mineral processing.	Sept 2008 to date

Participation in R&D Projects

Corfo Innova 11IDL2-10687

January 2012 – October 2014

Development of a continuous sensor for measuring bubble size distribution in flotation cells based on characteristic sounds emitted by bubbles. Role: Director. Project funded by Corfo Innova: Production Development Corporation. Total budget: US\$ 189,000.

Fondecyt 1110173

March 2011 – March 2013

Study of bubble coalescence prevention in the presence of frothers by means of bubble acoustic emissions in flotation systems. Role: Principal investigator. Project funded by CONICYT: National Commission for Scientific and Technological Research. Total budget US\$ 75,000.

FONDAP 15110019

January 2013 – December 2017

Solar Energy Research Center (SERC-CHILE). Role: Associate Researcher / Specialist in the line of solar energy in the mining industry. CONICYT: National Commission for Scientific and Technological Research. Budget: US\$ 1,680,000/year.

Publications in journals and/or conferences

1. **Kracht, W.**, Rebolledo, H., 2013. "Study of the local critical coalescence concentration (l-CCC) of alcohols and salts at bubble formation in two-phase systems". *Minerals Engineering* 50-51. 77-82.
2. **Kracht, W.**, Emery, X., Paredes, C., 2013. "A stochastic approach for measuring bubble size distribution via image analysis". *International Journal of Mineral Processing* 121. 6-11.
3. Emery, X., **Kracht, W.**, Garrido, F., Egaña, A., 2012. "Using two-point set statistics to estimate the diameter distribution in Boolean models with circular grains". *Mathematical Geosciences* 44 (7). 805-822.
4. **Kracht, W.**, Acuña, C., Orozco, Y., 2012. Role of frothers on the selectivity of minerals flotation process. (Title in Spanish: *Rol de los espumantes en la selectividad del proceso de flotación de minerales*). Conamet/Sam 2012. Congreso binacional de metalurgia y materiales, Valparaiso, Chile.
5. **Kracht, W.**, Finch, J.A., 2010. "Effect of frother on initial bubble shape and velocity", *International Journal of Mineral Processing* 94 (3-4), 115-120.
6. Suazo, C.J., **Kracht, W.**, Alruiz, O.M., 2010. "Geometallurgical modelling of the Collahuasi flotation circuit", *Minerals Engineering* 23 (2), 137-142.
7. **Kracht, W.**, Emery, X., Egaña, A., 2010. "A stochastic approach for measuring bubble size distribution via image analysis: A solution to the bubble cluster problem". In: VII International Mineral Processing Seminar PROCEMIN 2010, Santiago, Chile, 251-258.
8. Suazo, C.J., **Kracht, W.**, Alruiz, O.M., 2010. "A geometallurgical model of the flotation rate constant". In: Rheology in Mineral Processing 2010. Proceedings of the 8th University of British Columbia – McGill – University of Alberta International

- Symposium on the Fundamentals of Mineral Processing, Vancouver, BC, Canada, 319-329.
9. **Kracht, W.**, Finch, J.A., 2009. "Bubble break-up and the role of frother and salt", *International Journal of Mineral Processing* 92, 153-161.
 10. **Kracht, W.**, Finch, J.A., 2009. "Using sound to study bubble coalescence", *Journal of Colloid and Interface Science* 332 (1), 237-245.
 11. **Kracht, W.**, Finch, J.A., 2009. "A bubble coalescence study using sound". SME Annual Meeting and Exhibit and CMA's 111th National Western Mining Conference 2009, Volume 2, 472-480.
 12. **Kracht, W.**, Gomez, C.O., Finch, J.A., 2008. "Controlling bubble size using a frit and sleeve sparger". *Minerals Engineering* 21 (9). 660-663.
 13. **Kracht, W.**, Gómez, C.O, Finch, J.A., 2008. "Frother effect on bubble coalescence and break-up". In: V International Mineral Processing Seminar PROCEMIN 2008, Santiago, Chile, 207-214.
 14. **Kracht, W.**, Gomez, C.O., Finch, J.A., 2007 "Measurement of Wide Bubble Size Distributions in Flotation Columns Operated with Jet-type Spargers" in *Proceedings Cu2007-Volume II, Mineral Processing, Toronto, Canada*, 211-219.
 15. Quinn, J.J., **Kracht, W.**, Gomez, C.O., Gagnon, C., Finch, J.A., 2007, "Comparing the effect of salts and frother (MIBC) on gas dispersion and froth properties", *Minerals Engineering*, 20 (14), 1296-1302.
 16. Vallebuona, G., Casali, A., **Kracht, W.**, 2005, "Caracterización y modelación de las distribuciones de tamaño de burbujas en celdas de flotación con agitación mecánica". *Revista de Metalurgia*, 41 (4), 243 - 250.
 17. **Kracht, W.**, Vallebuona, G., Casali, A., 2005, "Rate constant modelling for batch flotation, as a function of gas dispersion properties", *Minerals Engineering*, 18 (11), 1067-1076.

Participation in Committees

IMPC 2014: Organizing and Editorial Committee

XXVII International Mineral Processing Congress

www.impc2014.com

PROCEMIN 2012: Organizing and Editorial Committee
IX International Mineral Processing Conference (Santiago, Chile)

PROCEMIN 2011: Organizing and Editorial Committee
VIII International Mineral Processing Seminar (Santiago, Chile)

PROCEMIN 2010: Organizing and Editorial Committee
VII International Mineral Processing Seminar (Santiago, Chile)

PROCEMIN 2009: Organizing and Editorial Committee
VI International Mineral Processing Seminar (Santiago, Chile)

Enviromine 2009: Technical Committee
I International Seminar on Environmental Issues in the Mining Industry (Viña del mar, Chile)

Reviewer for the IJMP
International Journal of Mineral Processing
September 2009 to date: Reviewer of articles submitted to the journal.