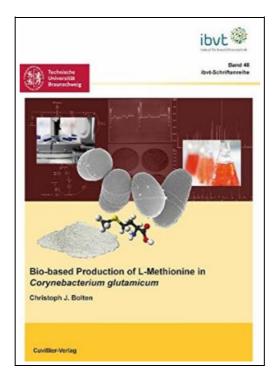
# Bio-based Production of L-Methionine in Corynebacterium glutamicum



Filesize: 5.46 MB

# Reviews

Basically no words to clarify. Of course, it is perform, still an amazing and interesting literature. Its been printed in an exceptionally basic way which is only soon after i finished reading through this ebook where actually altered me, change the way i really believe.

(Newton Runolfsson)

#### BIO-BASED PRODUCTION OF L-METHIONINE IN CORYNEBACTERIUM GLUTAMICUM



Cuvillier Verlag Sep 2010, 2010. Taschenbuch. Condition: Neu. Neuware - In the present work, Corynebacterium glutamicum pathways of the central metabolism were investigated from a systems-oriented view regarding a detailed understanding of the underlying reaction network towards future biotechnological production of L-methionine. The physiological characterization of the anabolic network of mutants, specifically designed for these studies, was achieved by combining fluxomics and metabolomics after rigorous validation of existing technologies, especially for metabolite analysis, and development of novel efficient protocols adapted to C. glutamicum. Above all, a lack of suitable sampling methods in the field of metabolomics was identified by validation of common protocols, not only for C. glutamicum, but also for various microorganisms including biotechnological important bacteria and yeasts. Based on these findings, a novel differential approach was developed and validated, whereby intracellular levels are determined via differential analysis of total broth and culture filtrate without cells. Applying this method, the existence of a novel threonine-independent pathway for isoleucine biosynthesis starting from homolanthionine was identified in C. glutamicum mcbR. This pathway withdraws significant amounts of carbon from the methionine biosynthesis. Subsequent studies identified the availability of NADPH as additional limiting step. In C. glutamicum mcbR, a deletion mutant with a deregulated methionine and cysteine pathway, the ADPH/NADP+ ratio was only 0.29 and thus much lower as that of the wild-type (2.35). Engineering of the NADPH metabolism via increased pentose phosphate pathway activity by enhancement of the transketolase operon resulted in a significantly increased NADPH/NADP+ ratio (1.40). Moreover, the utilization of the reduced sulfur sources methanethiol and dimethyldisulfide was investigated. Both sulfur compounds are utilized by C. glutamicum as source of sulfide and C1 carbon. This opens new possibilities to pass the high energy and NADPH demanding pathways of sulfate reduction and C1 metabolism for methionine biosynthesis. Using an isotope labeling...



Read Bio-based Production of L-Methionine in Corynebacterium glutamicum Online



# Other PDFs



#### The new era Chihpen woman required reading books: Chihpen woman Liu Jieli financial surgery(Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment. Paperback. Pub Date: 2012-05-01 Pages: 247 Publisher: Jilin Publishing Group title: new era Chihpen...

Save Document

**»** 



### The Preschool Inclusion Toolbox: How to Build and Lead a High-Quality Program

Brookes Publishing Co, United States, 2015. Paperback. Book Condition: New. 274 x 213 mm. Language: English . Brand New Book. Filled with tips, tools, and strategies, this book is the comprehensive, practical toolbox preschool administrators...

Save Document

»



#### Summer the 25th anniversary of the equation (Keigo Higashino shocking new work! Lies and true Impenetrable(Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment.Paperback. Pub Date: Unknown in Publisher: Modern Publishing Basic information Original Price: 28.00 yuan...

Save Document

»



## THE Key to My Children Series: Evan's Eyebrows Say Yes

AUTHORHOUSE, United States, 2006. Paperback. Book Condition: New. 274 x 216 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.THE KEY TO MY CHILDREN SERIES: EVAN S EYEBROWS SAY YES is about...

Save Document

..



#### Mass Media Law: The Printing Press to the Internet

Peter Lang Publishing Inc, United States, 2013. Paperback. Book Condition: New. New. 251 x 175 mm. Language: English . Brand New Book. Digital media law is now the dynamic legal territory. Mass Media Law: The...

Save Document

»